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THIRD SERIES VOL 56 NUMBER 4 FEBRUARY 1949

THE JOURNAL OF THE ROYAL INSTITUTE OF BRITISH ARCHITECTS

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Cathedral: Chantry of Hugh Sugar in the south nave arcading (1489). *From a photograph by Herbert Felton, F.R.P.S.*

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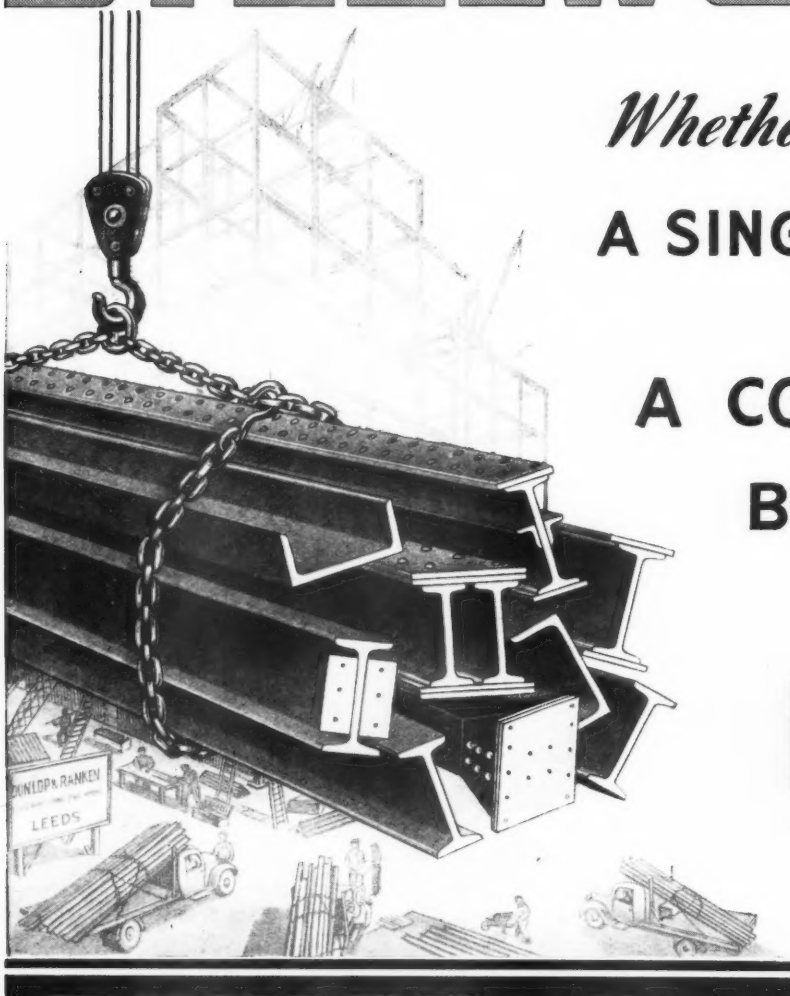

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THE JOURNAL OF THE ROYAL INSTITUTE OF BRITISH ARCHITECTS

THIRD SERIES VOL 56 NUMBER 4 : FEBRUARY 1949 : 66 PORTLAND PLACE LONDON W1 : TWO SHILLINGS & SIXPENCE

149 EDITORIAL

151 R.I.B.A. PRIZES AND STUDENTSHIPS, 1949: LIST OF AWARDS

152 PRESIDENT'S ADDRESS TO STUDENTS

153 CRITICISM OF THE DESIGNS—ANTHONY M. CHITTY

161 CHRISTMAS HOLIDAY LECTURES AT THE R.I.B.A. GIVEN BY PETER F. SHEPHEARD

162 SOME PROBLEMS IN ARCHITECTURAL EDUCATION—R. GORDON BROWN

168 THE ARCHITECTURAL PHOTOGRAPHS OF HERBERT FELTON

170 TIMBER PRESERVATION—E. H. NEVARD

172 THE POST REFORMATION KIRKS OF SCOTLAND—DR. A. L. DRUMMOND

178 FUNCTIONAL PROPORTION—H. LEWIS CURTIS

179 CORRESPONDENCE

181 REVIEW OF CONSTRUCTION AND MATERIALS

182 PRACTICE NOTES

183 BOOK REVIEWS

185 NOTES AND NOTICES

188 OBITUARY

189 MEMBERSHIP LISTS

190 NOTES FROM THE MINUTES OF THE COUNCIL

192 MEMBERS' COLUMN

R.I.B.A. Extra General Meeting

Because of the present great interest among architects in the Town and Country Planning Act, the R.I.B.A. has invited Sir Thomas Sheepshanks, K.C.B., K.B.E., Permanent Secretary to the Ministry of Town and Country Planning to give an address at a meeting additional to those announced at the beginning of the session. On 1 March at 6 p.m. Sir Thomas will read a paper on *The Town and Country Planning Act: Some Implications for Architects*. He will answer as many questions as possible during the evening, but would like to have as many as possible in advance as some of them may need research. Members who have questions on the Act and its working which they would like answered should send them in at once to the Secretary, R.I.B.A. Questions may also be asked at the meeting. Sir Thomas Sheepshanks' paper is complementary to that of Sir Malcolm Trustram Eve (see the January JOURNAL), and will deal only with questions which do not apply to the work of the Central Land Board.

Statistical Information on the Profession

The Council have adopted a recommendation by the Committee, which has been set up to consider the Present and Future of Private Architectural Practice under the chairmanship of Sir Percy Thomas, that information be collected forthwith about the present position and employment of architects. A questionnaire, simple in form and simple to answer, will therefore shortly be sent to all members and students of the Royal Institute.

The Council wish specially to emphasize that any statistical analysis of the collated information which may be published will make no reference to individuals and that individual members' replies will be treated in the strictest confidence. The questionnaire will be handled by a firm of statistical consultants who have been entrusted by the Royal Institute with this work; and the information supplied by members will be transcribed on to punched cards for mechanical sorting. Members will, of course, realize that it is in their own interests that the information be as complete and accurate as possible and that they should therefore answer the questionnaire and return it without undue delay.

The operation is something in the nature of a major undertaking, and its success obviously depends upon the individual contribution of each recipient of the questionnaire: it is just as important for every principal, whether in private or official practice, to complete and return it as it is for every assistant in salaried employment.

'The Architect in Industry' Conference and Exhibition

Architects are reminded that the conference on 'The Architect in Industry' will take place at the R.I.B.A. on 3 and 4 March. A large number of applications has been received, both from industrialists and from architects. There are, however, still a few seats available, and those wishing to attend should write at once to the Secretary, R.I.B.A. for application forms. (Full particulars appeared on page 102 of the January JOURNAL.) From discussions with several conference speakers, it is clear that a very wide range of interesting subjects will be covered. Most speakers are using slides or filmstrip to illustrate their papers so that the conference, together with the exhibition, will give a fairly complete review of the position regarding factory buildings at the present time.

The exhibition opens to the public on the same day as the conference, namely, Thursday 3 March. There will be no official opening ceremony, the exhibition being launched by a special Press view on 2 March and by the conference. In designing it, the Committee have avoided any over-emphasis of display technique. The work exhibited is being presented in a factual way, with emphasis laid on factory layout, production flow and the union of the building with the industrial processes.

The problems of factory building are regarded from the viewpoint of the manufacturer rather than from that of the architect. Nevertheless, the exhibition will show those services which the architect is specially qualified to provide in factory building. Today such services do not only concern planning, design, the administration of a building contract, but the host of negotiations on town planning, licences, steelwork economy, priorities of materials which present-day practice demands. It is true that the architect dislikes these frustration-making negotiations, but he is far more qualified to cope with them than is the manufacturer.

The special handbook, entitled *Industrial Architecture* has the same approach as the exhibition. In addition to articles on structures, lighting and welfare services, the handbook chiefly contains illustrated articles on some outstanding post-war factories in Britain, and a few foreign examples. There are eighty illustrations, including plans and diagrams of process flow.

Royal Fine Art Commission

Mr. Louis de Soissons, O.B.E., A.R.A., S.A.D.G., M.T.P.I. [*F*], has been appointed a member of the Royal Fine Art Commission in place of Sir Patrick Abercrombie, who has retired.

The President's Christmas Appeal

Sir,—I would like to thank all those who have so kindly responded to my Christmas Appeal on behalf of the Architects' Benevolent Society.

So far, 1,112 replies have been received, bringing in £864 8*s*. 4*d*., which is a very useful addition to our funds for the relief of distress in the architectural profession. I am most grateful to all who have thus made it possible for us to continue our work.

No doubt there are many who intended to contribute but who forgot to do so in the end-of-year rush. I would like to remind them that the Fund is still open.—Yours truly,

Michael Waterhouse
President

Use of Ordnance Survey Maps

Members of the R.I.B.A. whose work necessitates the use of extracts from Ordnance Survey maps will be pleased to learn that, in addition to the existing arrangement whereby licences may be obtained to take hand tracings from the Ordnance Survey maps on payment of an annual compounded fee of 5*s*. per partner (which was referred to in the March 1947 and May 1947 JOURNALS), a further arrangement has now been made by the Director General, Ordnance Survey Office, for the issue of similar licences to cover both hand tracings and reproductions by mechanical means. The fee payable in this case will be 10*s*. per annum in respect of every partner or director of each firm or company participating in the scheme, or in respect of each separate office operated by the firm or company, whichever is the greater number. Normally, however, only one licence, in the name of the firm, will be issued. Full details are given in the combined form of application and licence which accompanies this issue of the JOURNAL. The existing arrangement referred to above will remain in operation for those members who require to take hand tracings only.

Members are reminded that any unauthorized reproduction, whether by hand tracing or mechanical means, of or from any Ordnance Survey map or any map which has been derived from the Ordnance Survey, constitutes an infringement of Crown Copyright under the Copyright Act, 1911, and all who may have occasion to make use of Ordnance Survey maps in this way are advised to safeguard themselves by taking advantage of the facilities afforded by these arrangements which have been made for their benefit.

The South Bank

The action of Mr. Herbert Morrison in driving the first pile for the South Bank river wall on 17 January was the first concrete action towards an aim which the Royal Institute has consistently advocated for many decades. This aim is the replanning and rebuilding of the south bank of the Thames to make it as worthy, useful and dignified as the north bank. All sorts of schemes have been advanced by architects, discussed at Institute meetings and in the Press, and illustrated in exhibitions. These have ranged from the great Charing Cross bridge controversy, in which the R.I.B.A. took a leading part, to an extremely ambitious scheme to divert the river across the neck of its great northerly bend at Westminster—a proposal which the R.I.B.A. did *not* support.

Now at last the land between County Hall and a point just downstream of Waterloo Bridge is the property of the London County Council, and on it (to quote Mr. Morrison) 'Great buildings will soon arise, planned and designed as a whole under the supervision of that great architect of London buildings, Charles Holden'. The first use of the site will be for the main national exhibition of the Festival of Britain in 1951, for which one of the permanent buildings, the L.C.C. Concert Hall, designed by Mr. R. H. Matthew [*A*], the Council's architect, is to be built. After the Festival is ended, work is to start on the other permanent buildings, which will include the national theatre, conference halls and a large block of government offices.

Outdoor Advertising

The Council for the Preservation of Rural England have published (price 9d.) a pamphlet entitled *Posters and the Planning Act*. This is a well-written and illustrated statement on the present extent of poster advertising in town and country, a summary of the Regulations made under the Town and Country Planning Act, 1947, Section 31, and advice to Planning Authorities on how they should use the powers now conferred on them. On the London-Hastings road, says the pamphlet, there are 1,075 separate advertisements, 400 of which are on the gables of buildings and the remainder on hoardings or field signboards; trade names on premises and essential advertisements are excluded. On the main roads in Preston there were, in July 1946, 1,173 advertisements made up as follows: Government publicity, 159; garages, petrol, oil, tyres, 45; alcoholic drink and tobacco, 209; food and non-alcoholic drink, 170; patent medicines and toilet goods, 118; household goods, 125; newspapers and periodicals, 32; amusements, 186; miscellaneous, 129.

The C.P.R.E. does not pull its punches. The Government itself comes in for some hard knocks. While the Ministry of Town and Country Planning and local government bodies are endeavouring to protect the countryside and improve urban environment, the Central Office of Information claims that one-fifth of all available commercial poster sites are used for Government posters. The C.P.R.E. asks pertinently, why they need to use commercial space now that the war is over when they have a monopoly of radio publicity, and exceptional facilities on railway stations, in post offices and in other buildings frequented by the public. The problem, it is stated, is by no means exclusively a rural one; much urban advertising is crude, ill-placed or unnecessary—a dictum with which some architects who have had their buildings disfigured will doubtless agree, as in the case of the cinema illustrated in the pamphlet, which has the well-developed charms of a celebrated film actress occupying the whole façade above the entrance.

Catholic Art Exhibition at the R.I.B.A.

On 20 January Cardinal Griffin, Roman Catholic Archbishop of Westminster, spoke about art when he opened the Eighth Annual Exhibition of Catholic Art, held in the Jarvis Foyer at the R.I.B.A. until Saturday 5 February. The exhibition is annually organized by the Guild of Catholic Artists. The 116 exhibits ranged from modern crucifixes to present-day illuminated manuscripts reminiscent of ancient missals.

British Architects' Conference, 1951

The Council have decided to accept the invitation of the Royal Society of Ulster Architects to hold the 1951 Conference in Belfast to coincide with the Jubilee Celebrations of the Society.

The Council of Industrial Design

Mr. H. V. Lobb [*F*], who is Chairman of the R.I.B.A. Exhibition Sub-Committee, has accepted the invitation of the President of the Board of Trade to serve on the Council of Industrial Design.

R.I.B.A. Diary

TUESDAY 22 FEBRUARY 6 P.M. *Mannerism in Architecture*. Professor Anthony Blunt, C.V.O.

TUESDAY 1 MARCH 6 P.M. *The Town and Country Planning Act*. Sir Thomas Sheepshanks, K.C.B., K.B.E., Permanent Secretary to the Ministry of Town and Country Planning.

THURSDAY 3 MARCH-FRIDAY 4 MARCH. *The Architect in Industry*. Conference at the R.I.B.A. (see page 102 January JOURNAL).

THURSDAY 3 MARCH-SATURDAY 26 MARCH. 10 a.m.-7 p.m. week days, Saturdays 10 a.m.-5 p.m. *The Architect in Industry* Exhibition at the R.I.B.A.

TUESDAY 8 MARCH 6 P.M. *Rogue Architects of the Victorian Era*. H. S. Goodhart-Rendel, Mus.B.(Cantab.), M.A. [*F*].

TUESDAY 22 MARCH 6 P.M. A.S.B. Lecture. *The Protection of Metals against Corrosion*. Dr. T. P. Hoar, M.A., B.Sc., F.R.I.C., F.I.M.

R.I.B.A. Prizes and Studentships

The President's Address to Students

Criticism of Designs by Anthony M. Chitty, M.A., A.A.Dipl. [*F*], A.M.T.P.I. At a General Meeting of the R.I.B.A., 11 January 1949

The List of Awards

The Tite Prize: A Certificate and £100 for the Study of Italian Architecture. The subject was 'A Rowing Club for a New Town'. Awarded to Mr. Alastair Carson Mackintosh (student), 10 Evesham Road, Wallasey, Cheshire. (School of Architecture, Edinburgh College of Art.)

The Victory Scholarship and £120 for the Advancement of Architectural Education. The subject was 'An Aquarium, which includes the Headquarters of a Society of Natural Sciences'. Awarded to Mr. William Fowler Howitt (student), 'Barmekin', Cornhill Terrace, Perth, Scotland. (School of Architecture, Dundee College of Art).

A Certificate of Honourable Mention was awarded to Mr. Alexander John Gordon [*A*], 24 Brookvale Road, West Cross, Mumbles, Glam. (Welsh School of Architecture, The Technical College, Cardiff.)

The R.I.B.A. Silver Medal for Measured Drawings and £75. Awarded to Mr. Brian Arthur Francis Ellsmoor [*A*], 5 Bedford Park Mansions, The Orchard, Chiswick, London, W.4. (Bartlett School of Architecture, University of London.)

The Royal Institute Silver Medal and £50 for an Essay. Awarded to Mr. Henry Brian Leather (student), 14 Orleans Road, Hornsey Lane, London, N.19 (Birmingham School of Architecture), for an essay entitled 'Baroque Inspiration'.

A Certificate of Honourable Mention was awarded to Mr. Colin Graham Lindsay Shankland, M.A. [*A*], 23 Well Walk, London, N.W.3 (Cambridge University School of Architecture and Architectural Association School of Architecture), for an essay entitled 'World New-Builded'.

The Owen Jones Studentship: A Certificate and £100. For the improvement and cultivation of knowledge of the successful application of colour as a means of architectural expression. Awarded to Miss Norah Rosalie Glover [*A*], The White Cottage, Bulstrode Way, Gerrards Cross, Bucks. (School of Architecture, The Polytechnic, Regent Street, London.)

The Arthur Cates Prize: £100. (In the current year the prize was offered for the promotion of architecture in relation to the application of geometry to vaulting, stability of edifice and design.) *Not awarded.*

The Banister Fletcher Silver Medal and £26 5s. for the Study of History of Architecture. The subject was 'Lethaby's Architecture reviewed; A Critical Appreciation'. Awarded to Mr. Donald William Insall (student), 'Beaumont', 31 Northumbria Drive, Henleaze, Bristol. (R.W.A. School of Architecture, Bristol.)

The Alfred Bossom Research Fellowships £250: for Post Graduate Research. Awarded to Mr. Denzil Bridge Nield [*A*], 49 Welbeck Street, London, W.1. (School of Architecture: The Polytechnic, Regent Street, London.)

The Neale Bursary: £100 for the Measurement of Old Buildings. Awarded to Mr. Harry Anthony Wheeler [*A*], 9 Broomfield Gardens, Stranraer, Wigtownshire. (Glasgow School of Architecture.)

The Hunt Bursary: £75 for the Encouragement of the Study of Housing and Town Planning. Awarded to Miss Josephine Preston Reynolds [*A*], Incewood, Sea Road, Wallasey, Cheshire. (Liverpool School of Architecture: The University of Liverpool.)

The Athens Bursary: £125 for Study at the British School at Athens. Awarded to Mr. John Needham [*F*], School of Architecture, Dundee College of Art, Dundee, Scotland. (School of Architecture: Dundee College of Art.)

The Rome Scholarship in Architecture 1948: £250 per annum for two or three years' study and research at the British School at Rome. Offered by the R.I.B.A. and awarded by the Faculty of Architecture of the British School at Rome. *Not awarded.*

The R.I.B.A. Silver Medal and £10 in Books for Students of Schools of Architecture Recognized for Exemption from the Final Examination. Awarded to Mr. Geoffrey Martin Harper [*A*], 3 Little Hill, Church Street, Wednesbury, Staffs. (Birmingham School of Architecture.)

The R.I.B.A. Bronze Medal and £10 in Books for Students of Schools of Architecture Recognized for Exemption from the Intermediate Examination. Awarded to Mr. Alistair Gregory Smith (Probationer R.I.B.A.), 55 Church Hill Road, Oxford. (Oxford School of Architecture.)

The Archibald Dawnay Scholarships, 1948: Five Scholarships of £65 each for the Advanced Study of Construction. Scholarships awarded to (1) Mr. Roger Christopher Marshall (student), 3 Carmona Gardens, Frizinghall, Bradford, Yorks. (Leeds School of Architecture.) (2) Mr. Kimball Pollit (student), 4 West Royd Villas, King Cross, Halifax, Yorks. (Leeds School of Architecture.) (3) Mr. Frank Shaw (student), 51 Westcliffe Road, Cleckheaton, Yorks. (Leeds School of Architecture.) (4) Mr. Alan Price Roach (student), 29 Park Drive, Romford, Essex. (Department of Architecture: The Northern Polytechnic, London.) (5) Mr. Arthur Robert Court Johnston (student), The Dovecote, Scothy, Carlisle. (Liverpool School of Architecture: The University of Liverpool.)

The R.I.B.A. Henry Jarvis Studentship at the School of Architecture, The Architectural Association, 1948: £50. Awarded to Mr. Peter Arthur Newnham (student), 7 Taviton Street, London, W.C.1.

The R.I.B.A. Howard Colls Travelling Studentship at the Architectural Association, 1948: £15 15s. Mr. Timothy George Bidwell, Flat 2, Lancaster Lodge, 19 Kew Gardens Road, Kew Gardens, Surrey.

The R.I.B.A. Donaldson Medal at the Bartlett School of Architecture, University of London, 1948. Mr. Thomas Frederick Alston Manning (student), 38 Boileau Road, Ealing, W.5.

The R.I.B.A. Prize for Art Schools and Technical Institutions with Facilities for the Instruction of Intending Architects (£10 in Books), 1948. Awarded to Mr. Martin Reynolds Taylor, The Haven, Chestfield Road, nr. Whitstable, Kent. (City of Canterbury College of Art.)

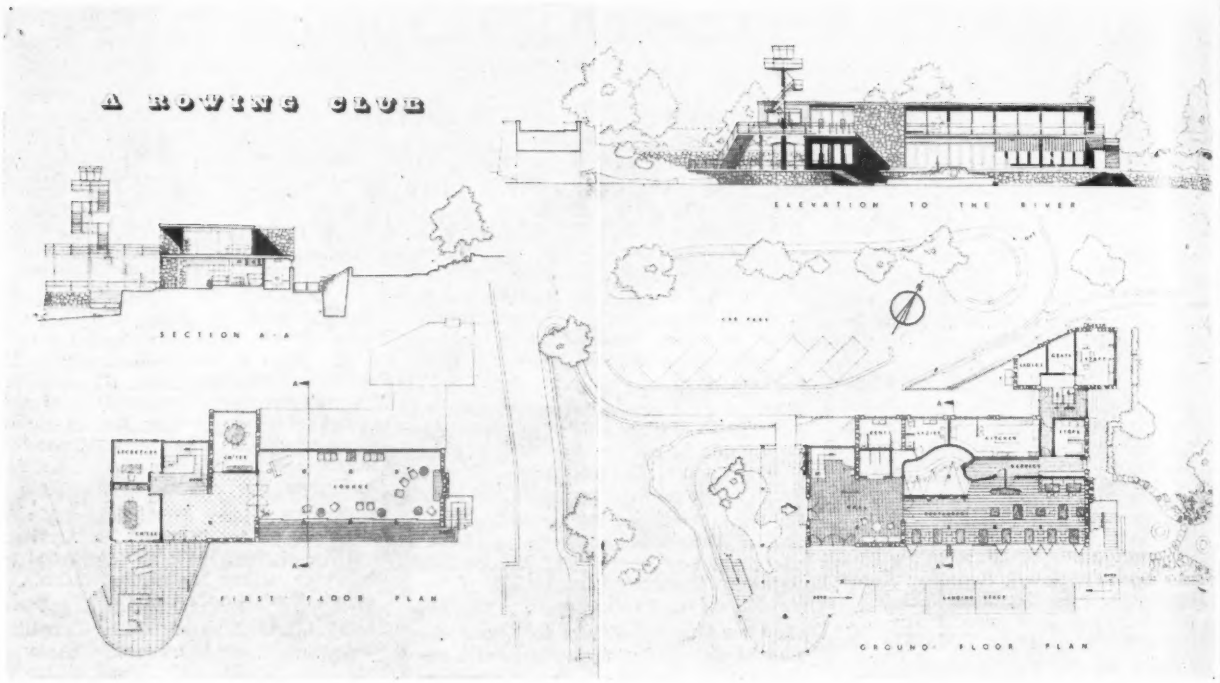
The R.I.B.A. Prizes for Public and Secondary Schools. These Prizes are of a total value of £10 10*s*. They are offered for an essay of not more than 1,000 words or for sketches or scale drawings of a building or part of a building. The Prizes are offered for competition between boys and girls in Public and Secondary Schools.

The Prizes were awarded as follows:

Essays. (1) A prize of £1 11*s*. 6*d*. to K. R. Tyler, Reigate Grammar School, for his essay on the County Hall, London. (2) A prize of £1 11*s*. 6*d*. to Andrew Brown, Dr. Morgan's School, Bridgwater, for his essay on St. Mary's Church, Berrow.

Sketches. (1) A prize of £5 5*s*. to R. B. Lord, Manchester Grammar School, for his drawings of St. John the Baptist Church, Adel. (2) A prize of £1 1*s*. to M. E. Calvert, Northampton Grammar School, for his drawings of St. Matthew's Church, Northampton. (3) A prize of £1 1*s*. to W. B. Worrall, University College School, Hampstead, for his drawings of Lincoln's Inn.

The award of the Ashpitel Prize will be announced later.



Address to Students

By the President, Mr. Michael T. Waterhouse, M.C.

THE PRESIDENT, R.I.B.A.: The main event before us this evening is the criticism of the designs submitted for the various Prizes. For this reason my address to you will be brief. I shall only offer you some suggestions and various thoughts which you may develop for yourselves.

Two difficulties confront any President on this occasion. The first that, being an annual affair, almost everything there is to be said on the subject has been said before, either by his predecessors, or by someone else. The second, that he must often feel, as I do, that it has been better said.

I am conscious that in what I say tonight you may recognize the thoughts of others, perhaps even quotations, some of these acknowledged, where I am conscious of them as such. Others I would consider rather as borrowed inspirations so absorbed as to be part of my own outlook.

This brings me to the first main point. An asset, valuable to all, but particularly to an architect, is the power to absorb quickly, the more quickly the better, the thoughts of others. Whether it be by reading, by conversation, by observation, by sketching, it is one of the fundamentals of any education. Mould yourself to be quickly and easily impressible with a memory retentive of that impression. Even if it be something which you think you do not now, or even will not ever, want. Even if you only mean to discard it. Seize the opportunity to take everything that is offered. You may complain that time is too short for omniscience, that already your life and studies are too overcrowded with the embarrassments of innumerable sciences and allied professions. At the risk of apparent inconsistency and even self-contradiction I would agree and endorse what was said only a few nights ago at the Architectural Association by Mr. Jordan.

Let the architect not cumber himself with too much of the intricacies of the various knowledges of differing types of engineers or surveyors, or other professions. Let him be true to architecture. *But* that truth is unattainable without the spirit of impressionability and the power of retentive absorption.

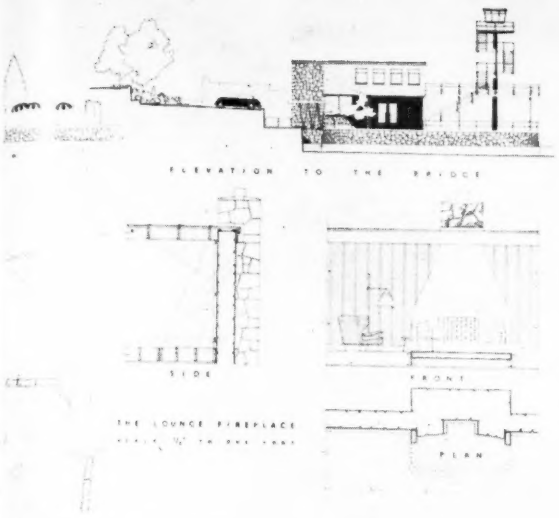
The duty of the architect to his client is a matter on which much has been said, and, indeed, one in which the student actually passes an examination. I will not therefore labour the point. But I will say that the greater the ability of the architect to exercise this receptivity the better will he fulfil these duties.

I would remind you also that this aspect was most brilliantly expounded by John Gloag in July of last year in his paper at Durham University. The only complaint I have against his address is that he exploited, better than I have ever done, one of my own pet theories as to the major difficulty that architects as a class have to face with clients as a whole. I will summarize it thus:

A generation or more ago an enterprising publisher produced a series of books entitled *Every Man his own Doctor, Every Man his own Lawyer*, and so on, not that they did much harm to those professions. Indeed, they probably increased litigation to the benefit of the lawyers and incipient mortality to the benefit of the doctors. But they never produced *Every Man his own Architect* for the very good reason that they knew perfectly well that Every Man thought he knew that already.

Besides the client the other great human factor in our lives is the builder. I regret that our duty to the builder does not appear to be made such a formal feature of our professional catechism as that to the client. This is a subject too long to do more than hint at tonight. There are obvious matters such as the supply of drawings and information of every kind in proper and reasonable time; the ever watchful care necessary upon oneself to ensure that the builder has *all* the information and not only scraps; the decencies and courtesies demanded by the system of tendering if fairness is to be really scrupulous; the constant guard upon oneself to see that neither you, nor any other, demand of him anything that he can not afford to refuse, even though it is more than you ought in fairness to ask.

There is also another matter on which guidance should be given, though it is of a rather different kind. I outline it as follows: The architect should neither usurp, nor be expected to undertake, those obligations of the organization of a job which are, under the contract, the builder's liability. The contractor undertakes to produce certain buildings at a certain cost in a certain time. It is his duty so to organize the job that he does this and makes his own profit too,



THE TITE PRIZE COMPETITION : 1948 - 1949

The Tite Prize: a Certificate and £100 for the Study of Italian Architecture. The winning design by Mr. Alastair Carson Mackintosh (Student R.I.B.A.) of the School of Architecture, Edinburgh College of Art

Subject: A Rowing Club for a New Town. The programme stated that the proposed new town is in a district which has a traditional interest in oarsmanship. The site is a flat island separated from the mainland by a backwater of the main river, the land rising beyond the backwater to a lane and main road. The latter crosses the river by an 18th-century stone bridge, scheduled as an Ancient Monument. The club building is to accommodate not more than 300 members and 'must be carefully designed in relation to its site and function and should provide a high standard of the amenities associated with an active sports club'. The building should be neither excessively luxurious nor designed and constructed to austerity standards. The schedule of accommodation included as principal items a lounge, restaurant with bar and open-air terrace to which the restaurant might be extended in fine weather. The boathouses of the club are elsewhere

greater or lesser according to his own organizing ability relative to the tender figure. The extent of the architect's supervision and control is a clear and separate matter.'

During the war, and since, there have been some cases of misconception of these independent functions, and a tendency to expect or even demand of the architect an unjustifiable interference in the contractor's affairs.

Finally, what of architecture today and tomorrow? I would say this. It is not what it was—and not what it will be. But, of course, nothing ever is what it was. At the same time what anything *was*, is both why it is what it is, and what it will be. This sounds rather like Lewis Carroll, but like many of Alice's remarks it is a profound truth only obscured by the fact that it is expressed in three and a half dozen very simple monosyllables. It sums up the essence of tradition. It epitomizes the basis of all progress whether human or individual. It can be used to prove with equal satisfaction or dissatisfaction either the truth or the reverse of all theories of relativity, space, or time. It is in fact an all purpose axiom, infallible except in so far as it is subject to the unpredictable feature of human nature. It leaves the future nebulous in your hands for its moulding, according to the extent of the humanity of your nature.

Criticism of the Designs

By Anthony M. Chitty, M.A., A.A.Dipl. [*F*], A.M.T.P.I.

IN THE WORDS of the dictionary a 'critic' is a 'giver of judgement, a censurer'. I do not, however, intend that on this occasion this meaning should be appropriate, for the critic's duty here is to act as a gramophone record of the collected views of the various juries who have sat in judgement on the work of the 345 competitors who contended for last year's prizes.

First of all, let me give my sincere congratulations to all those who took part, to those who won no prizes as well as to those who did, and especially to those who competed in far off lands (for it requires courage and faith to enter a competition under those conditions). To those who were unsuccessful, it may be some comfort to reflect that at least they achieved the discipline necessary to carry a task to its end—an experience that every architect must have in the execution of his work. Let not those who were unsuccessful last year be discouraged, but let them enter again this year and be successful.

And after that without more ado we will turn to the actual works, starting with the Tite Prize.

The Tite Prize. There were 211 competitors, of whom nineteen were allowed to proceed with their final drawings. The subject was a Rowing Club with a riverside site at the finishing line of the racing reach. This prize founded 'for the study of Italian architecture' has previously been restricted to design in a particular style, and this conception of architectural design being now outmoded, the R.I.B.A. Prizes Committee agreed last year to lift this restriction for the future.

It is interesting to observe that the designs submitted, though not in 'an historical style', nevertheless share a style which future critics will find no more difficult to date than R.I.B.A. prize drawings of the Gothic or classic revivals or the neo-Georgian era. The only conclusion to be drawn from this is that the best architecture is largely independent of the inescapable mask of its contemporary style.

Site. Not many of the competitors really took advantage of the site, and only a few realized that their building would be shown in plan when looked at from the top of the river approach.

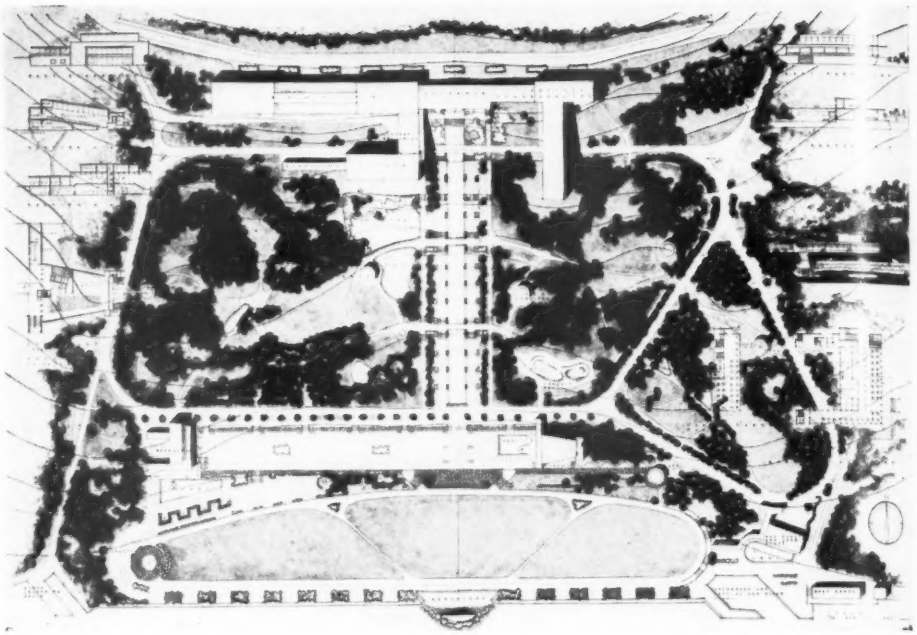
Entrance. On the whole the entrances were poorly planned, either much too spacious or much too mean. In hardly any of the schemes was there enough thought given to the relationship between the entrance and staircase or entrance and main lounge.

Main Lounge. The jury thought this could either be on the ground or the first floor, but if placed downstairs it should be accessible direct to the terrace. Direct circulation to the restaurant was considered a bad point. Lounges which have a solid wall blocking part of the view up the river were considered poorly planned.

Restaurant. The jury were divided in their opinion as to whether the restaurant and kitchen should be on the same floor. In most schemes the kitchen quarters and the servery were too small, and inadequate access was allowed for service entrances.

Secretary's Room and Committee Rooms. Very few of the schemes gave enough attention to these smaller rooms, which in many cases faced north.

The Victory Scholarship and £120 for the Advancement of Architectural Education. The winning design by Mr. William Fowler Howitt (Student R.I.B.A.), the School of Architecture, Dundee College of Art



Subject: An Aquarium. The programme stated that as part of a future Empire Centre for the study of zoology, a Scientific Society is to build an aquarium and members' headquarters. In addition to scientists and students some 100,000 people are expected to visit the aquarium each year. The site is well wooded and falls quickly to a wide non-tidal river. The Society expects an imaginative and characteristic architectural treatment of the scheme. One or more buildings may be provided, but the principal units are: (*a*) The Aquarium, which is to contain exhibition space and display tanks of sizes ranging from 15,000 gallons to 25 gallons, the majority not exceeding 2,500 gallons. Detailed technical notes on the planning, construction and illumination of tanks are given. A reception room (with suitable tanks), laboratory, staff rooms, food storage and preparation rooms and outdoor pools for sea mammals are also required. (*b*) A museum of 6,000 sq. ft. floor area, cinema for 250, and restaurant for 250. (*c*) The Society's Headquarters, consisting of members' rooms, lecture hall, library, two dining rooms, laboratories, plant room and offices

Lavatories and Cloakrooms. Changing rooms for the rowers were not required in the programme, but the lavatory accommodation in most schemes was, if anything, rather on the meagre side and not always in its right relationship to the entrance and hall.

General Character. On the whole the majority of the schemes submitted managed to get a character suitable to this type of building, though as many as 30 per cent had tried to force the scale in an endeavour to get a more imposing layout than was called for.

Boat Houses and Landing Facilities. Although the problem was called a Rowing Club, it really had to be regarded as a small sports club with a great attachment to rowing, as the whole of the boat houses, changing rooms, quays, practice boats, and such like were considered to be further down the river and not part of the scheme. For this reason the jury did not penalize the quite inadequate landing stages and steps shown on almost all the drawings.

The prize, as you have heard, was awarded to Mr. A. C. Mackintosh (Student R.I.B.A.). This scheme was undoubtedly head and shoulders above the rest for an efficient plan, neat enough elevations and a good simple presentation in black and white with a hint of colour. Competitors had to make the choice of planning the building on one or two floors, and most competitors found the site too small to satisfy a one floor plan. This scheme (on two floors) erred in a rather lavish upper floor plan with wasted spaces. Like so many of the schemes, the cardinal error was committed here of ignoring the view down the river, an opportunity that the jury felt should not have been missed by any competitor. The shape and position of the bar was exciting, but the ½ in. detail was rather meagre. The other major defect in design was the characterless appearance of the buildings, relying altogether too much upon outworn clichés for its effect.

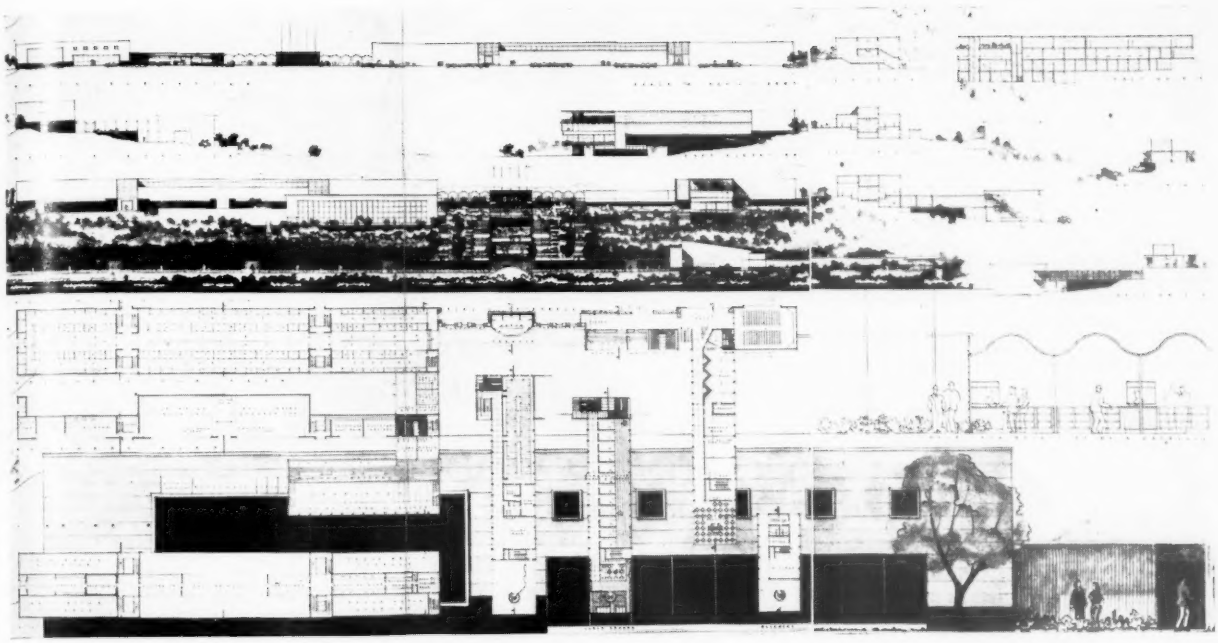
While on the subject of cliché, I must mention the sad tendency to be seen in so many designs both for the Tite and for other prizes, towards a harsh medley of modernistic clichés. Do not misunderstand me—the distinction I want to make is between good modern architecture and bad modern architecture, not between a new style and an old style. There is no substitute for continuous and painful study in designing a building, and the lazy use of cliché does not make architecture. The all-glass walls, with little consideration to opening lights, to condensation, to heating, to draughts; the rustic stonework, the complex of vertical and horizontal features, the lack of finesse in detail, the arbitrary roof shapes, the use of the round window (that most dangerous of all architectural shapes). These elements too easily become meaningless in inexpert hands. The designs of Taenos, Stephen, Skol and Serviam all suffered seriously from this tendency.

Mr. Chitty then commented on five other schemes submitted by competitors for the Tite Prize.

No scheme, I felt, had really seized upon the character of the site, its relation to the river, its winding stream, its existing bridge, its approach downhill, and made a proper relationship between it and the buildings.

The Victory Scholarship. Now we come to the Victory, for which seventy-two competitors entered and fifteen were permitted to finish. This was a mammoth task—the planning of an aquarium, together with the headquarters of a learned body, cinema, restaurant and other ancillary buildings upon a falling riverside site. The contours of the site were really the key to the scheme, though many competitors missed this point and placed high buildings unsuitably against the skyline. The winner, Mr. W. F. Howitt (Student R.I.B.A.) produced a really first class scheme. The planning was masterly, and the details were technically sound, while the underlying ideas of the terrace layout and dispersal of buildings on the site was brilliant. The water cascade was excellently handled and a big feature in the design. The whole scheme, like most of those submitted, kept close to the original esquisse. The way was left open in the programme to disperse the various buildings on the site, and most of those who ignored this came to grief accordingly with lumpy groupings, and in one case even a courtyard plan. Mr. Howitt's plan handled this disparate layout very skilfully with the aquarium and Society headquarters at the back, the smaller buildings in front, and the restaurant, café, etc. on the waterside. But even in this design there were unfortunately some well worn design clichés to be found. The only other criticism to be made was of the presentation which though sober, clean and sufficient, was made too complicated by imposing the plans upon the ½ in. elevation of which more than necessary was shown.

The jury's second choice was Mr. A. J. Gordon, who though adopting the single building group idea—a major disadvantage—yet was technically proficient with the



lighting problems and the detailed planning. The single building, however, led to a feeling of congestion everywhere in the plan, and to cramped entrances and poor circulation.

Mr. Chitty then made brief comments on the other schemes submitted by competitors for the Victory Scholarship.

The standard of draughtsmanship in the Victory this year was generally low—in fact the Tite submissions were higher in this respect, and I would like here to make a plea for better draughtsmanship through out the schools. In some schools there has recently been a slightly contemptuous attitude to matters of presentation and drawing and colouring technique. But we should not forget that the drawing is the only link the architect has with client, quantity surveyor, builder and operative. If this medium is imperfect, so also will be the interpretation of the architect's idea. Moreover, each of the four persons I have named requires a slightly different technique of presentation. Facility of draughtsmanship is not to be despised in the architect.

R.I.B.A. Silver Medal for Measured Drawings. This prize was sadly neglected, there being only two entrants, though the winner's standard was good.

The prize goes to Mr. B. A. F. Ellsmoor [*A*], whose drawings of St. Catherine's College, Cambridge, were excellent. The set showed a grasp of what measured drawings are for, as well as being sensitively drawn. The original survey notes had been redone as a fair copy in three volumes and form an excellent record. The jury felt that a $\frac{1}{2}$ in. scale drawing of one of the central features of the façade would have been an advantage, these features being rather too elaborate for proper delineation to the scale chosen. Some overall dimensions on the sections might have been provided. One defect was the suggestion of shadow by thickening of some lines, as well as an attempt to show roundness by the same method. This technique is not proper to measured drawings. The lettering of the sheets was in a debased type and not up to the standard of the rest of the draughtsmanship.

The other entrant submitted a set of drawings of Christchurch College, Oxford, which though thorough were somewhat lacking in character and reached only the standard of a good school study rather than that of this award. It was felt that the portrayal of stone jointing was not a true record and there were a number of variations in the finished drawings from the survey notes. A small key plan would be useful with sets of drawings of this kind.

The Owen Jones Studentship. This prize of a Certificate and the sum of £100 is stated to be for 'the Improvement and Cultivation of Knowledge of the successful application of colour as a means of Architectural Expression'. There were five entries. One of the best was unfortunately ineligible and therefore *hors concours*. Of the remaining four the work of Miss Norah Glover [*A*] was outstanding and received the prize.

Nothing submitted by any competitor was quite as competent and imaginative as the floral composition, and the drawing of the double veranda was quite charming. The competitor submitted no portfolio, however, and it was not felt that the other drawings gave evidence of any particular direction in her studies with the exception of the sketch of the Morris wallpaper. They are well drawn in their way but scrappy and unanalytical.

Mr. Chitty then commented on the work submitted by three other entrants for the Owen Jones Studentship.

The Alfred Bossom Research Fellowship. This valuable post-graduate research prize of £250 was awarded to Mr. Denzil Nield [*A*], who submitted a programme of research upon panel walls in framed structures with special reference to facings and finish. The jury felt that here was a subject dealing with problems arising out of contemporary practice in building, and that the author had shown through his previous research that he could make a valuable contribution to architectural knowledge in this field.

The Arthur Cates Prize. The Arthur Cates Prize of £100 is offered for 'the promotion of the study of architecture, more especially in relation to the application of geometry to vaulting, stability of edifice and design, coupled with actual measurement, and delineation both geometrical and pictorial of appropriate example in Great Britain or foreign countries.'

This prize was not awarded. There was only one entrant and the jury did not feel that the work submitted showed sufficient evidence of original study of the science and geometry of vaulting. The drawings were too laboured, and the detail was too repetitive, and further, the sheet showing development was not sufficiently worked out. It was not clear whether the vaulting of Henry VII Chapel at Westminster Abbey had in fact been measured by the competitor.

Under the terms of the award, since it has not been made in 1948, the prize is to be offered in 1949 for the promotion of architecture in relation to some other subject, not vaulting. It should be remembered that this and other post-graduate prizes

call for the contribution of something new to the body of knowledge or thought upon the particular subject chosen.

The Hunt Bursary. This prize (a sum of £75 for the study of housing and town planning) has been awarded to Miss Josephine Reynolds [*A*]. There were five competitors.

The jury found Miss Reynolds the only competitor showing real evidence of scholarly research in the true sense. There is nowadays too great a tendency for students to dig out information already well known and catalogued, comment generally upon it and having put it into an attractive binding, label it 'Research'. This is not research, as nothing new comes to light and no contribution is made to the subject in question. Miss Reynolds' work persuaded the jury that she was a scholar and her work, which included essays on the 'Origins of the Town Planning Movement', another on Port Sunlight, and a three volume illustrated and properly annotated history of Thomas Horsfall (1841-1932) would, if carried further as she proposes, make a real contribution of the kind to which I have referred. Her work was the most original of that submitted, and I am additionally pleased she has won this prize as she has been unsuccessful on a number of previous occasions.

Mr. Chitty then commented briefly on work submitted by four other entrants for the Hunt Bursary.

Neal Bursary for Measured Drawings. It is to be regretted that there was only one entrant for this valuable prize of £100. The standard of the drawings by Mr. H. A. Wheeler [*A*] was, however, satisfactory, and the prize was accordingly awarded to him.

The R.I.B.A. Silver Medal Essay Prize. Of all the prizes given by the R.I.B.A. this is the oldest and most venerable. It is 113 years since it was founded, and past years have been graced with some masterly work. This year has seen an entry of ten (rather more encouraging than last year) with two competitors running closely for the prize. The standard of these two is good, though not quite in the class of the best over the century.

Though both were competent, grace, style and literary merit were defective, as, indeed, was unfortunately the case with all the entries. The jury are anxious to remind future competitors for this prize that style in the writing of an essay is an equal partner with the subject matter and, before entering the lists for this distinguished prize, all should study the great masters of English prose.

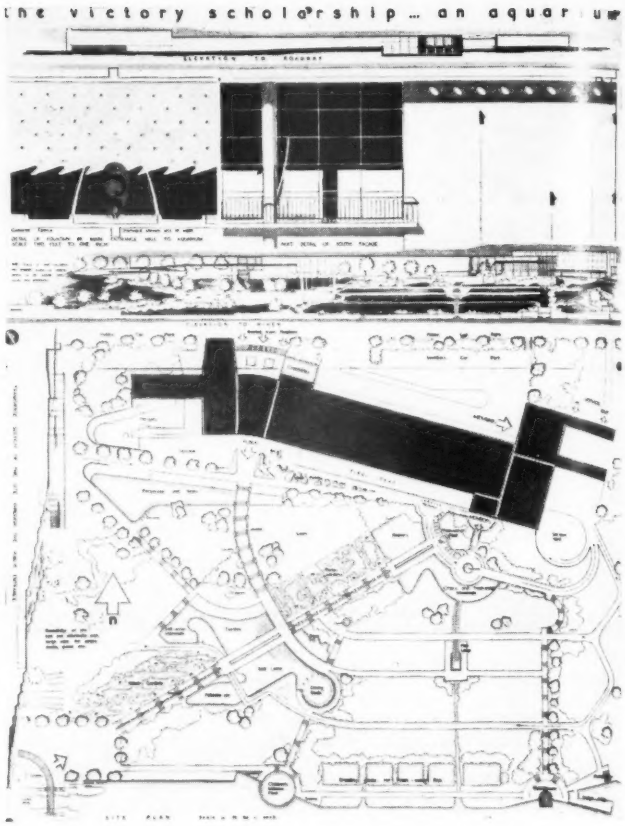
The medal was awarded to Mr. H. B. Leather (*Student* R.I.B.A.) for his essay on Thomas Archer. This was a competent piece of research which shed, the jury thought, new light upon the subject, and presented the material in a scholarly way.

An honourable mention was awarded to Mr. C. G. L. Shankland [*A*] for an essay on William Morris with the hope expressed that further work on this intriguing subject would win the author the Silver Medal in some future year. The essay was an able and refreshing exposition of the development of Morris's social and æsthetic ideas, based on ample reading and showing a penetrating power of selection. Mr. Shankland did not go quite far enough either in exploring the sources of Morris's ideas or alternatively in criticism of their ultimate effects. Had the essay been further developed in either of these directions, it would have been nearer to being the contribution to architectural thought, which is one of the criteria laid down in the conditions.

A word must be said about titles: both Mr. Leather's title 'Baroque Inspiration' and that of Mr. Shankland—'World New-Builded' were felt to be ill-chosen.

Mr. Chitty then commented briefly on other essays submitted and the following titles: '*Evolution of the Stone Bridge in England*', '*Edward Blore—Artist and Architect*', '*The Architecture of a large electric railway undertaking*', '*The Architecture of Europe*', '*The Character of the English Village*', '*The Baroque in Mexico*', '*Almshouses and their Modern Development*', '*A Pillar of Salt*'.

Banister Fletcher Medal Essay. This is the junior essay prize offered each year to students and probationers for the study of the history of architecture. There was an encouraging entry of fifteen and unanimity by the jury on the first two places in the list. The subject set was 'Lethaby's architecture reviewed: a critical appreciation'.



The Victory Scholarship and £120 for the Advancement of Architectural Education. Design awarded a Certificate of Honourable Mention, by Mr. Alexander John Gordon [*A*], the Welsh School of Architecture, The Technical College, Cardiff

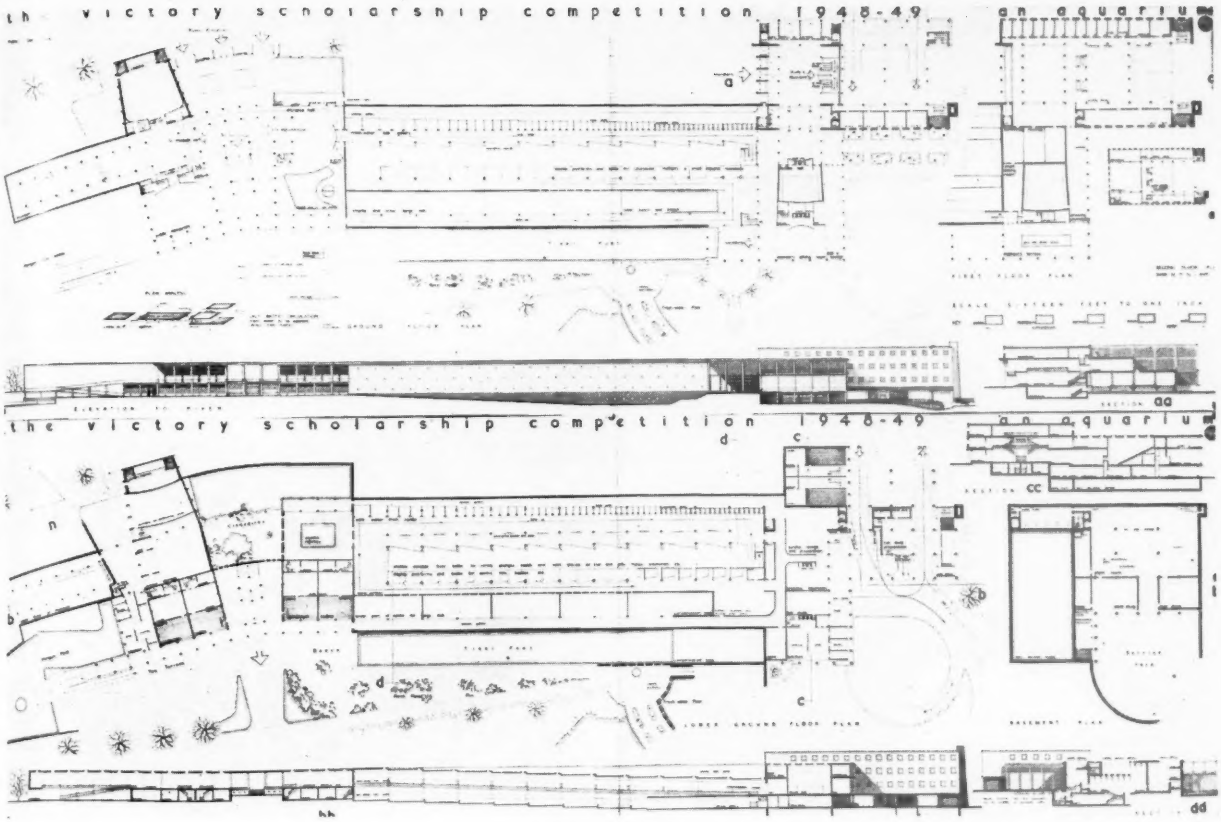
The medal goes to Mr. D. W. Insall (Student R.I.B.A.), whose essay was excellent and faltered only very occasionally. It was well illustrated with line and wash drawings, together with an excellently chosen photograph as frontispiece. This essay was well up to the standard of winners of this prize.

Mr. Chitty then commented on nine other essays.

Prizes for Public and Secondary Schools. These prizes are in two sections: (*a*) Essays and (*b*) Drawings. Personally, I find each year as much interest in these awards as anywhere, in view of the growing importance to the profession of proper pre-entry standards. It is often said that the profession is overcrowded and that the examinations produce too many indifferent architects. One cure for this is much higher standards in drawing, design and knowledge of the subject before entering upon the recognized courses.

This year's essays were undistinguished, and the jury decided to split the prizes according to merit between essays and drawings thus:

(a) **Essays.** K. R. Tyler (*Reigate Grammar School*) for his essay on County Hall, London. Andrew Brown (*Dr. Morgan's School, Bridgwater*) for an essay on St. Mary's Church, Berrow. Each of these was awarded 1½ guineas. The first was competently written and showed a developing



critical sense marred, however, by a certain immature sophistication which is out of place in such a work. The sketches were dull. The second was less expert but showed more sensibility to the subject, though here there was too much suggestion of guidebook sources of information instead of individual thought and observation. The drawings accompanying were poor.

The essay of D. G. Cramp (*St. Olave's Grammar School*) on the subject of the City Churches was interesting and informative, but too long and disqualified on that account. Also it had photographs and cuttings instead of the drawings asked for in the conditions.

Generally, the jury wished to remind competitors that the conditions should be studied very carefully before starting upon the work. The headmaster of St. Illtyd's College, Cardiff, is to be congratulated on the standard of presentation reached by the two entries from the college.

(b) **Drawings.** R. B. Lord (*Manchester Grammar School*) received an award of 5 guineas for his excellent set of drawings of St. John the Baptist, Adel. The draughtsmanship, colouring, lettering and arrangement upon the sheets was good. Altogether this was a fine effort, and the jury rewarded it with half the total money allotted for drawings and essays together.

Two other entries were awarded a guinea each: M. E. Calvert for a pleasant set of drawings in pencil of St. Matthew's Church, Northampton. They were spoiled, however, by bad presentation on crumpled paper instead of being neatly mounted. W. B. Worrall, for some sketches on a single sheet showing Lincoln's Inn.

All these young people as well as future entrants for these prizes would do well to visit as many exhibitions as possible, both of modern painting and of end-of-term architectural students work, and observe other people's technique for subject matter and presentation. The drawings this year were much better than the essays. It should be remembered that an essay on an architectural subject ought to be more than just a catalogue of dreary facts such as can be had from any guidebook; the object is to add something new to the sum of human knowledge.

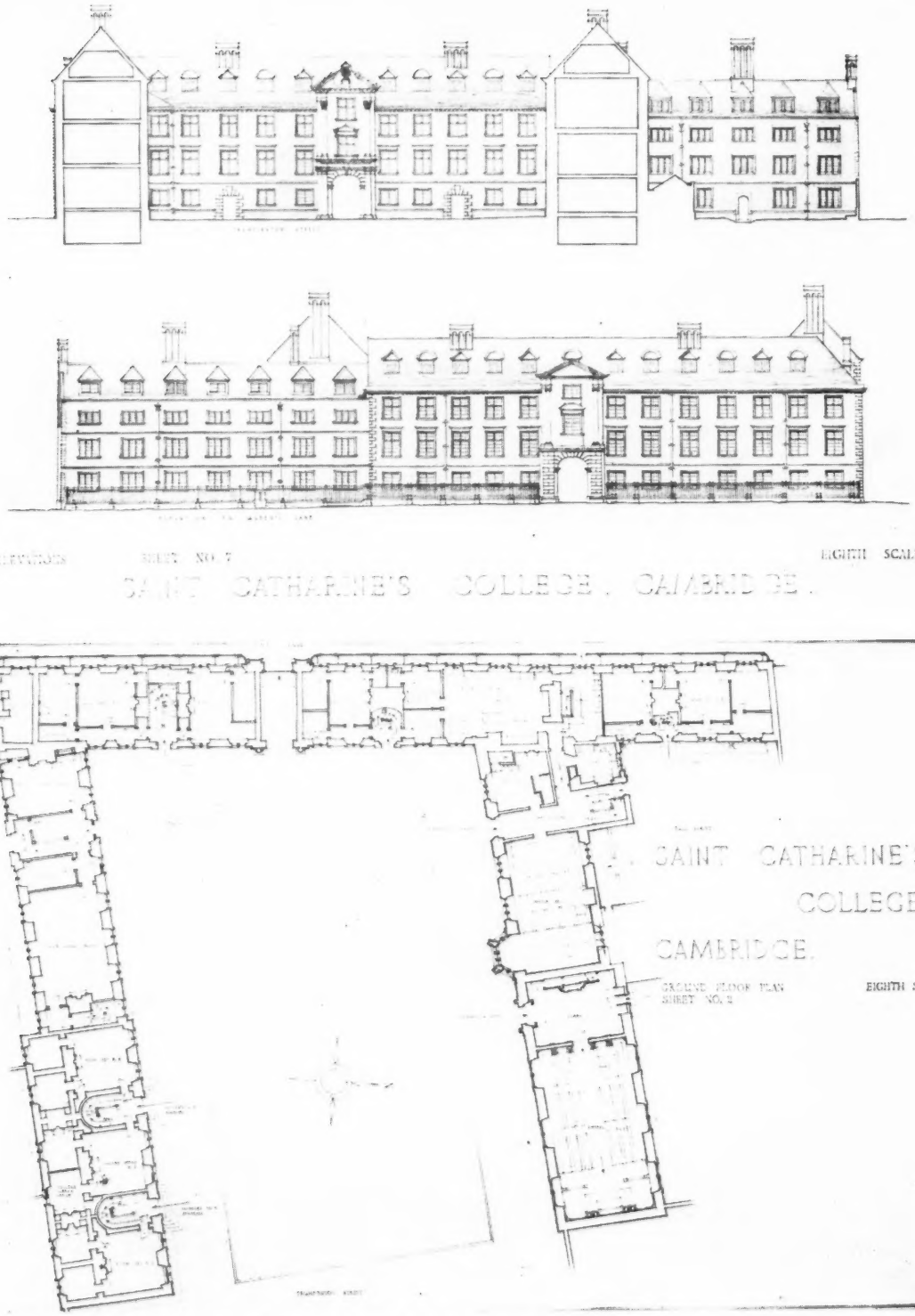
The Athens Bursary. Finally, the Athens Bursary has been awarded to Mr. John Needham [*F*].

VOTE OF THANKS

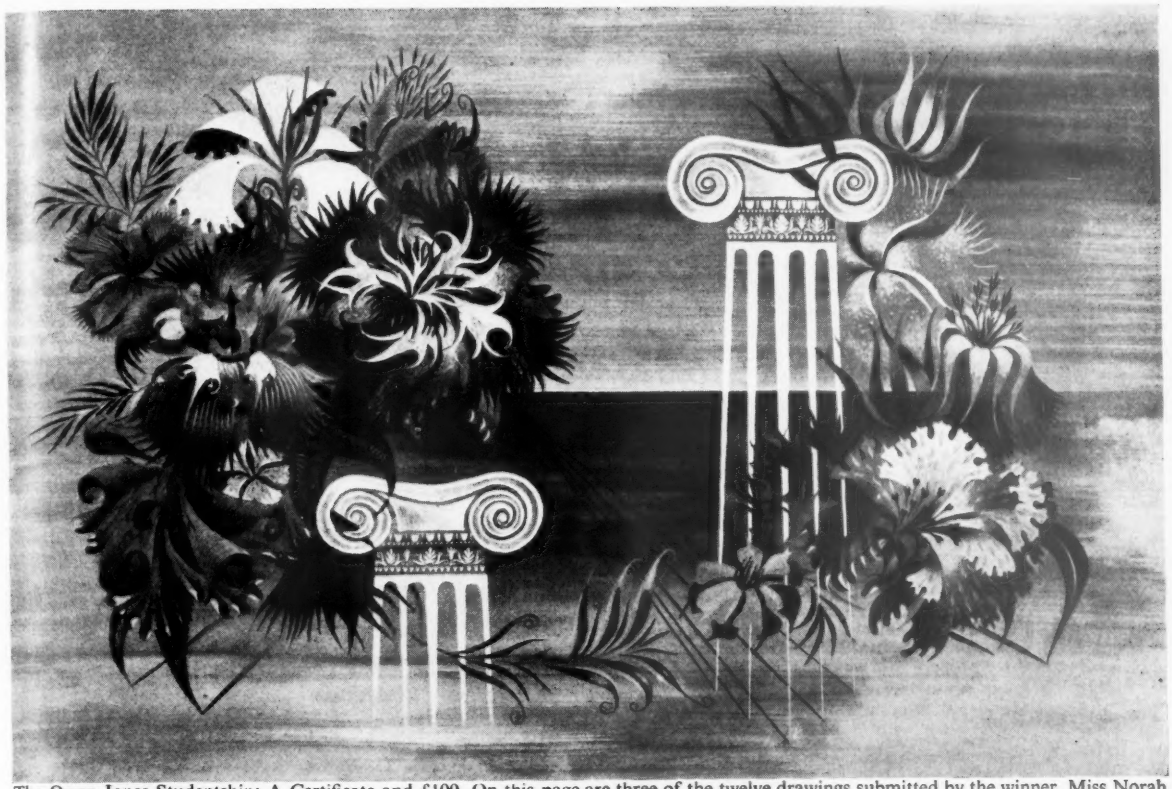
Mr. R. E. Enthoven [*F*] (President of the Architectural Association): I speak on behalf of this highly competitive audience with a great deal of compunction because I have only once myself entered for an R.I.B.A. Prize, about twenty years ago, when I unwittingly mounted my drawings on some sheets with another student's testimony of study on the back. As luck would have it both sides of the drawings were required by juries in different parts of the R.I.B.A. at the same moment!

This meeting gives opportunity for congratulation to the select prize winners. It is possibly less important to them to know why they were successful than for the 300 or so others to realize why they failed to benefit from what is said by way of criticism. This will be achieved only if they are fully convinced that the judgment passed is right and that it is sympathetic to contemporary trends, tempered with the wisdom of practical experience. Such an atmosphere of complete confidence has undoubtedly been achieved this evening. On this score, apart from any other, we are greatly indebted to the President for his wise words touching on the problems of practice—as well as for his brain twister—and to Mr. Chitty for his admirable review in which he fulfilled his duties as critic. The depth charges dropped in this room last year are still reverberating. Mr. Chitty has confined himself to detail and discerning comment on the works submitted. If, indeed, to use his own words, he was no more than a gramophone record I would say that his tone was excellent and his needle sharp! His views on such matters as research, draughtsmanship and clichés have been most valuable to all students. The address and the criticism were really

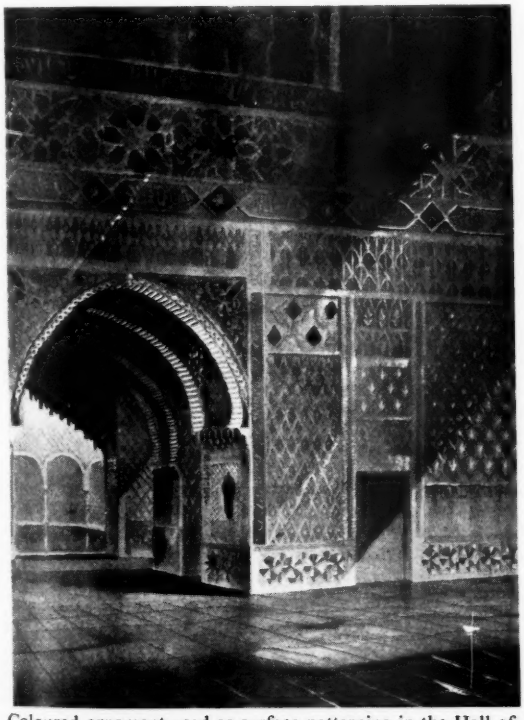
(*continued on page* 160)



The R.I.B.A. Silver Medal for Measured Drawings and £75. Two drawings from a set of six by the winner, Mr. Brian Arthur Francis Ellsmoor [*A*], the Bartlett School of Architecture, University of London



The Owen Jones Studentship: A Certificate and £100. On this page are three of the twelve drawings submitted by the winner, Miss Norah R. Glover [*A*]. Above: a composition of free floral forms for a mural



Coloured ornament used as surface patterning in the Hall of the Ambassadors, the Alhambra

Floral colour ornamentation used to accentuate structure. The Hypostyle Hall, Temple of Ammon, Karnak

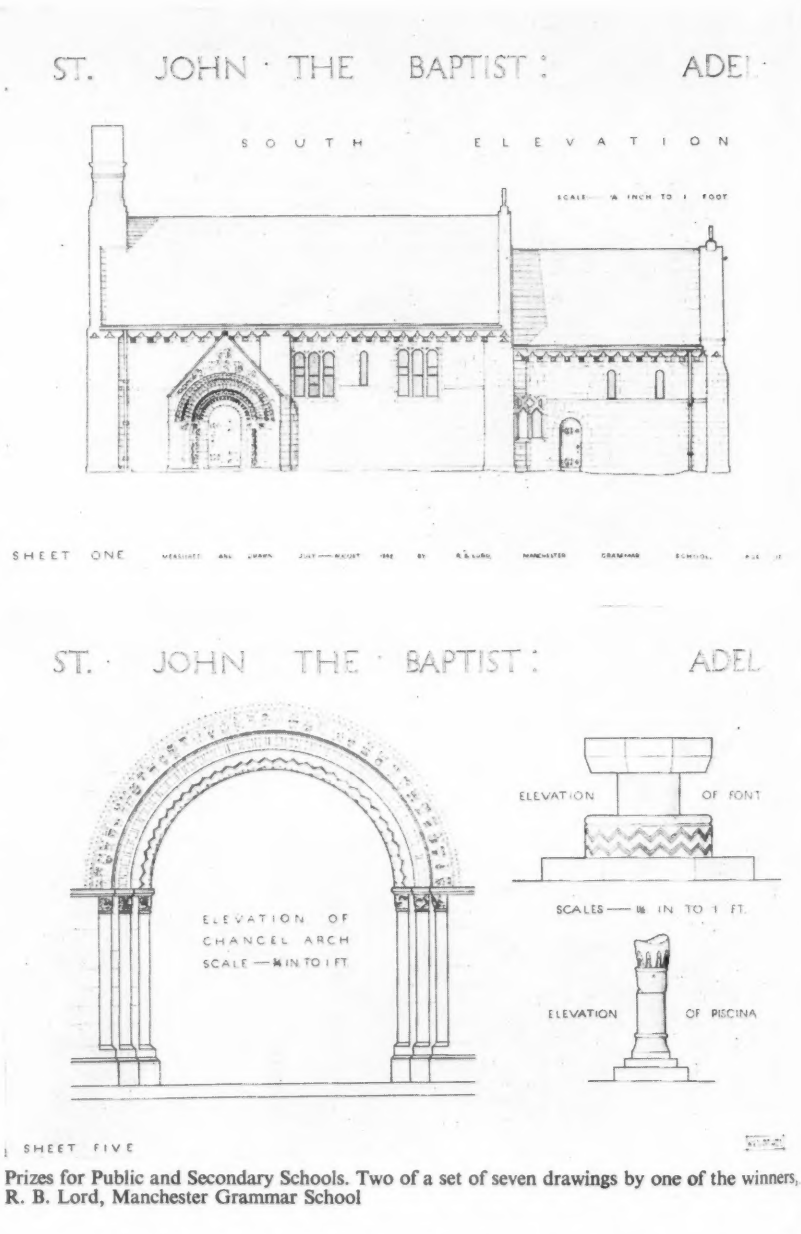
complementary, and I therefore, link them together in proposing on your behalf what is a very genuine and sincere vote of thanks.

Mr. R. Furneaux Jordan [*F*] (Principal of the Architectural Association School of Architecture): It is an honour and a pleasure to second this vote of thanks and to express, I am sure, on your behalf the enjoyment and benefit we have derived from the words of wisdom from the President and the extremely discerning criticism which Mr. Chitty has given us. Mr. Chitty's criticism was an extraordinarily good gramophone record. He performed his function astonishingly well, and combined the Scylla of eulogy and the Charybdis of severity in a most admirable manner, though I think none of the works submitted deserved either. I can speak as a member of one of the juries, perhaps one of the most arduous, or at any rate, one which has to do a great deal of work, the jury for the essay prize. I speak for that and say that Mr. Chitty did represent our views very precisely indeed.

This occasion is a very important one in the R.I.B.A. year. It is clearly important to the prize winners and prize losers, a stocktaking of the many hours of work they have put in. I feel also that it is an important event in contemporary criticism. It is also important, perhaps rather less directly, as an annual comment and stocktaking among ourselves upon the use and administration of the very valuable competition prize funds which the Institute has at its disposal, funds which came from the 19th century which have now to be disposed of in the middle of the 20th century. This is a very arduous task which the Institute has to perform. It is not hardness in the sense of hours; but one of the most important pieces of work connected with the event of this evening is the work done, much of it a year ago, by the juries as writers of programmes. The writing of programmes for the prizes and for architectural education generally is obviously an extremely important thing and one to which we cannot attach too much weight since it sets the whole direction of the work of over 300 people during the coming year.

I feel, too, that the juries in undertaking this work again realize very fully their responsibilities and I think they know now that the way is largely clear for the writing of programmes which can produce really contemporary designs. I do not mean dated designs in the sense in which Mr. Chitty referred to them in dealing with the Tite Prize, but in terms of genuine contemporary technique. In memory of the donors we can have a clear conscience in bringing that aspect of things entirely up to date. The terms of the Tite award have been revised and the victory is a contemporary prize. So far as the memorial to Owen Jones is concerned we have a completely clear conscience. If alive today he would be busy with experiments. In fact I think the only prize fund without contemporary intentions is the memorial to Pugin, but that is a prize which will always serve its purpose. Therefore I feel that there is no reason why the programmes for the designing prizes should not be entirely contemporary. I do not mean the designs for the prizes, but the writing of programmes for the designs.

If that were done we should surmount a very genuine problem today. I am not speaking for one school—I am speaking, I know, from consultation with my colleagues, for many schools—when I say that many students of quality do not compete for the R.I.B.A. prizes. The reason for that has to be found. It is not sufficient to say that there is a psychological resistance and allergy to the competition or prize system. I think it is that, compared with the work done in a school of architecture, there is very often a slight mist of unreality over some of these prizes. There is an unknown jury with whom the competitor can not discuss his scheme. There is an aloof critic—not that Mr. Chitty was—and many people would like, figuratively speaking, to get to grips with him. There is a non-existent client and an unreal site which the competitor has never seen. That is the mist of unreality which I think prevents many students of the best quality in our schools from competing, and that is a problem which the juries, as setters of programmes, have to cope with. The answer is a difficult one. These programmes are done in various far-off places as well as nearer home, and the reality of the site, if it is as important as I think it is, is a genuine problem. I


ST. JOHN · THE BAPTIST : ADEL ·
SOUTH ELEVATION
SCALE — ¼ INCH TO 1 FOOT
SHEET ONE
ST. · JOHN THE · BAPTIST : ADEL
ELEVATION OF CHANCEL ARCH
SCALE — ½ IN TO 1 FT.
ELEVATION OF FONT
SCALES — ½ IN TO 1 FT.
ELEVATION OF PISCINA
SHEET FIVE

Prizes for Public and Secondary Schools. Two of a set of seven drawings by one of the winners, R. B. Lord, Manchester Grammar School

think it *is* important that modern architects are also in a state of some confusion with regard to what the fundamentals of design should spring from, whether from the human function of the building, from modern building technique or from the site. I should like to see, when programmes are written again for these very great prizes, that problem tackled and photographs of and notes on the site supplied to competitors, at least for major designs.

Finally, one of the most important and serious things Mr. Chitty said in his remarks about the Tite Prize was that many of the competitors had not taken advantage of the site. That is always a serious defect, and especially so in modern design, which may spring from the nature of the site rather than from any canon of design, and, in the case of anybody who was asking for money to go to Italy to study, the defect is fatal.

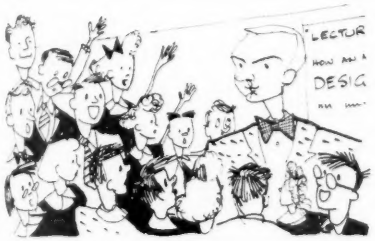
Mr. Chitty also referred to clichés. That is a running sore in all teaching of design today; in fact, so much is this so that the only thing the matter with it is that it becomes a cliché of itself. I think that clichés in modern design will only be avoided when there is this fundamental thinking about the structural basis and origin of the actual forms used. I think there should be the same effort with regard to the basis of forms as about the realities of the site.

That brings me to one remark with which I should like to conclude, and that is in connection with the Bossom prize. That was awarded for the study of panel walls in framed structures with special reference to facings and finish. If any romantic thinks that this is a hard-boiled prize I would say that it is only through some such real piece of research, finally transferred to real building and then transferred to the Tite or Owen Jones competitions in the coming years that we shall have a genuine contemporary style. May I say how very glad I am to second the vote of thanks to the President and to Mr. Chitty for the very valuable evening they have given us.

The President: I have discovered that I am supposed to make the chief reply to the vote of thanks. I am really going to put it all on Mr. Chitty because I was the *hors d'oeuvre*, he was the meat course, and your sweet and savoury you have just had; but I will complain to Mr. Jordan that he has said what I wanted to say before I could say it. What I want to thank Mr. Chitty for specially is his true-to-date contemporary criticism, expressing the outlook of his generation on his generation of architects and that which is immediately following him. I should also like to express, as I know he will do, the real and deep thanks of the Institute to the juries for the hard work they did in setting and maintaining the past high standard—the juries who gave Mr. Chitty the wherewithal on which to deliver his very illuminating and very telling criticism.

Mr. A. M. Chitty: I should like, very briefly, to thank my friends, Mr. Enthoven and Mr. Jordan, for their kind remarks. I agree very much with what Mr. Jordan said about the amount of criticism which should be given. This, of course, comes up every year, and I think every year the juries and critic try to deal with it as it should be dealt with. I briefly calculated in this connection that 130 man hours of time had been devoted to the drawing work, and it is most graceless that a critic should deal with that work in less than one man hour. That, unfortunately, is inevitable. I offer my heartiest congratulations to the winners, and to the non-winners 'Better luck next time'.

The President then presented the prizes to the winners, after which the meeting terminated.



The Christmas Holiday Lectures at the R.I.B.A., 1948

Given by Peter F. Shepheard, B.Arch. (Livpl) [*A*], A.M.T.P.I.

THIS YEAR'S SPATE of Christmas Holiday lectures arranged by the learned Societies for the delectation of boys and girls provided something for every type of palate. While Sir John Cockcroft talked on atomic energy, James Fisher on bird life and Waldo Lanchester on puppets, Sir Frederick Bartlett was lecturing at the Royal Institution, and talks on the building of ships and the harnessing of electricity were organized by the engineering bodies.

Amongst such numerous counter attractions (for the lectures must unavoidably overlap—the holidays being so short) it is gratifying to know that architecture more than held its own. In this Mr. Peter Shepheard—this year's R.I.B.A. lecturer—is to be congratulated. He chose as his subject *How an architect designs and builds*, and it was evident from the start that the subject made a big appeal to the audience. Not only was the first lecture well attended, but the numbers present for the last lecture exceeded those at the first—a pleasing experience for any speaker. All the talks were profusely illustrated by slides, and a new feature this year was the allotting of time at the end of each lecture for questions. A less expert speaker might have had rather an uncomfortable three-quarters of an hour, but Mr. Shepheard took it all in his stride, and obviously enjoyed being shot at and it was quite evident that the audience enjoyed the shooting!

At the first lecture Mr. Shepheard gave his audience an idea of what gifts an architect must possess and how he is trained: in the second he dealt more specifically with the actual stages in the design of a building and described in his third talk the way to look at different buildings and how to obtain pleasure from this experience. Some of the questions bore little relation to the talks which had gone before, but many were extremely pertinent and showed that the questioner had given a good deal of thought to what the lecturer had said.

Such questions were asked as: Could you tell us the difference between architecture and engineering? Would you say that only functional design is beautiful and that nothing non-essential should be put into a building? Modern architects and many other artists—painters and sculptors—are doing all they can to get away from symmetry—the classical idea: do you think this is a good thing? How long ago did architects start? Do you think the advance of prefabrication will end art in architecture? Is it essential for a good architect to be a good mathematician? What are the relative responsibilities of architects and builders? What is an isometric drawing? Is architectural work easy to come by? Why do modern architects when building churches use the Gothic style instead of a modern one? Should the organ in churches be allowed to interrupt the view from the west end? Do you approve of the four-leaf clover cross roads? Can you reconcile the need for more space for our towns with the need for more agricultural land? Is there any rule against building beyond a certain height in London? When was this building designed? Will the Festival of Britain in 1951 evince new architectural styles?

This selected series of questions indicates the wide range covered by Mr. Shepheard, and the high level of intelligence and keenness of his audience. Altogether the talks represented something of an ordeal which not many architects would care to face, and Mr. Shepheard is to be congratulated on the way in which he emerged from it, holding the keen interest of his audience until the end. Speakers in this series of talks in previous years have set a high standard, and to have surpassed it is no mean achievement. Our thanks are given to Mr. Shepheard for so successfully guiding the steps of future clients in the way they should go.

Some Problems in Architectural Education

By Professor R. Gordon Brown

A.A.Dip. [A], Professor of Architecture, Edinburgh University, and Head of the School of Architecture, Edinburgh College of Art

Read before the Royal Institute of British Architects, 11 January 1949. The President in the Chair

The President: I am going to introduce to you a person who, to many of you, is an old friend, under a new name. I refer, of course, to Gordon Brown, Professor of Architecture at Edinburgh University.

Professor Gordon Brown: My paper is concerned with problems of architectural education. When I was preparing it two architects, with experience of the matter, asked me if I did not think that the schools had served their purpose.

This question would appear to reflect a widespread feeling that at least considerable changes should be made in our present educational system, and especially such changes as would tend to introduce a greater contact with reality. It is usually this aspect which architects stress. On the other hand a large number feel that the greater need is for broadening the general education of the young architect. Demands on the one side for the type of graduate who would immediately make a very good assistant and demands on the other hand for a much wider cultural basis in architectural education, have led to an expansion of the curriculum beyond reasonable limits, in an effort to please everybody. We have apparently come to the end of this period of expansion, and we must now face the more difficult problem of selection and contraction. Some brilliant students have been able to stand the pace which has been set in recent years, and one has seen a number of them, almost immediately after graduation, win major competitions, against older and experienced architects. In a way I feel that their success is almost, in itself, a criticism of our present system. I believe that there are no infant prodigies in architecture and that to force the development of a student in his early twenties is to risk destroying creative ability which would have been greater if it had been allowed to grow naturally.

If one accepts that we face considerable changes in education over the next ten years, then the first major problem is to state clearly what we are trying to do. Ultimately, the object of all architectural education must be to produce buildings of fine quality. This fine quality in building can only spring from quality of mind, which is not to be ensured by the quantity of work done but rather by careful selection and relation of subjects and by the influence of environment. Selection of subjects for study must also be related to the standard of student intake. Our education is therefore considerably affected by the secondary schools which produce our probationers.

Secondary education, like architectural education, is something about which it is difficult to generalize, but experience teaches one that applicants with the School Certificate—and shall we say, five credits, are, as a rule, pathetically unawakened to all matters concerned with design. Few of them have any general conception, even in the broadest outline, of the history of the arts in this country or in Europe. Nor have they any basic knowledge on which to develop their critical faculties. If one takes a group of a hundred students who have got their School Certificate with five credits and expects uniformity of standard, or anything like it, one will be disappointed. Some will have had one hour's drawing a week, and some will have had as much as sixteen hours a week for two years. Some will have studied science and some will not. The real understanding which they have of buildings, which they say they like, is almost nil. But most difficult of all, they come with a lack of self-confidence which the architectural schools can not afford to ignore. It leads, if one is not very careful, to a lack of integrity.

This may be too gloomy a view, but I have no doubt that, if we wish to produce architects of real quality, we must be very much aware of the problems arising out of our intake and we must include general studies of the type undertaken in the university schools. At the moment these parallel studies are dealt with under the heading of history in many schools. I think this is unfortunate and leads to a wrong emphasis, and possibly in the long run, to reaction.

It should not be forgotten that amongst the many other qualities which the architect requires is that of robustness. It is a difficult quality to cultivate in the schools, if we maintain an artificial separation from the rest of the profession. I feel certain that we should re-establish a much closer link between the office and the school work, and this can no doubt be done in different ways in different parts of the country and in different types of schools. It seems unnecessary to say how one considers it should be put into operation, but I would say that everything possible should be done to give the student a real knowledge of office practice and procedure from the time he enters the profession.

There are a number of things which can be learned most rapidly and well by contact with practical building rather than lectures. While a more highly developed contact with the office would undoubtedly reduce the time spent on some studies, it would not, alone, lead to a sufficient reduction. One of the most important first steps, if we are to re-define our aims, is to limit the size of the problem undertaken in the senior years of the schools. These large subjects, when they require detailed working drawings, make it imperative that we continue with the advanced technical and specialist lectures without which such problems cannot be done. Many of these more advanced technical studies have their place, I think, in post-graduate rather than undergraduate work.

I would like to ask the meeting whether they do not feel that it would be better to make detailed studies of far less ambitious

subjects and expect our fifth year students to be able to design in detail nothing larger than a medium-sized block of flats. At the same time problems should be set involving much bigger schemes which would be a real exercise in imagination and logic, but not exercises in advanced building technique. I may be wrong in this, but I believe that the average student cannot keep abreast of all aspects of modern technique. He is almost forced to neglect one part in order to spend adequate time on others. This leads to the production of an unbalanced person who is very conscious of the gaps in the vast range of knowledge which he is expected to have absorbed.

There are other subjects, such as the layout of an exhibition, the design of a precinct, and you can probably think of more suitable ones, which would stretch and test the imagination and give experience in the handling of major problems without involving detailed problems of building technique.

What I have tried to stress so far is that we should consider quality rather than quantity. We should bear in mind not only what we wish to produce at the end of the architectural course, but the capacity of the student whom we take in. Through contact with the office we should try and cultivate robustness and realism.

In planning a course we must bear in mind the relationship between the architectural schools and post-graduate work. The majority of the students are ex-service men with commitments which make it impossible for them to undertake post-graduate work on the finance which is available. This will change in a few years time, and I think we should do everything we can to emphasize the importance of this stage in the student's development.

A proper balance between undergraduate and post-graduate work will arise from the realization that an architectural school is not a place to which you go in order to try and learn everything that there is to know about architecture. It is only a period in a general development. Post-graduate work is another such period.

The R.I.B.A. Prizes and Studentships provide one of the best means for post-graduate study. In addition we should not neglect the valuable assistance which can be offered by the schools in a possible combination of teaching and research work. In this way, by combined teaching and research, there may be a chance of producing some of those books which we so badly need.

If we realize that an architect's education is not finished when he leaves the schools we ought to be able to produce men who have the makings of good architects and, at the same time, are useful assistants. One can not ignore the fact that most of our students are going to be assistants for some time after leaving the schools.

I would like to go on now to consider educational technique. This follows a well-established form in most of the schools at the present time. It rests basically on subjects done in the studio related to the student's design experience and to the lecture syllabus. In this system the student designs a series of buildings which are progressively more involved and tend to become larger in size. It is a remarkably standard technique, and its variations appear rather superficial and little influenced by experiments abroad or in other parallel studies at home.

I wish that we could have a special committee which would make careful analysis of all the information available on new techniques in education which might be applicable to architecture.

I would include, not only teaching techniques, but examination and testing techniques. In saying this I do not wish to imply that I think the present technique in architectural education is not good. The present system has great advantages, and is valuable to the student, but I think it is too little influenced by advances in technique in other fields and parallel studies.

There is a danger that the student, working under existing methods will be concerned with his little building and all the new problems which it raises, and he may do too little fundamental thinking. This approach will be none the less superficial, because the student himself is a sincere man wishing to do his job well. Techniques must be found which allow him to concentrate on fundamentals only, during certain subjects.

I would say that there can be no doubt that as a technique the schools must always be superior to other forms of training. Education is a matter of environment and a series of very carefully selected and related experiences. I do not think that any other method can provide this carefully planned relation in the way the schools do, and although I feel that the office should be playing a far bigger part in the student education in some schools, I am quite certain that it should not be allowed to supplant the school system.

The next question with which I should like to deal is that of environment. I was recently told that the headmaster of a public school had said that he went on the principle of choosing the parents rather than the pupils. I feel very perturbed by this. Everyone knows that background can be a fundamental factor in both short term and long term results. With the widening of the opportunities in education today I think the schools must see that there is a new need, and it is their duty to meet it. It is a fundamental need of the community as a whole that those coming to us from backgrounds which have been limited by lack of money or opportunity should be given full chance to develop during their undergraduate days.

This is comparatively easy for the universities, but extremely difficult for many schools situated in our great cities. The problem of providing a fine environment is something which can not be achieved easily. We should do our utmost to persuade authorities to place schools of architecture in fine surroundings. In addition, we should try and find means through the National Trust or any other way that might be suggested, to enable students not only to work but to live in buildings of real character and beauty for a part of their undergraduate life.

This is more easily done in the country than in the town. In the country we could get our students out into fine landscape for a period of their course. I think it would be of great advantage to the students and to the profession in the long run. I am certain that for many of our young men and women it will be the only period of their lives in which they live in real country, and I doubt whether anyone will deny that architects who are to undertake the great work which must be done before the end of the century must have at least this minimum experience of country life.

It may be that, in time, people will be so conditioned by living in cities that their real roots will be in urban or metropolitan things. That is not so today. The transition to urban life is comparatively recent, and men still have instinctive leanings towards forms and colours found in nature, and especially in their own country or district.

Apart from these considerations one hopes that a great deal of building will be done in the countryside during the latter half of the 20th century. As everyone knows rural building is a highly specialized problem and just as deserving of special study as city bye-laws and Building Acts.

I can almost hear someone saying: 'Yes, but how is this going to produce me the right sort of assistant. Is this scheme not in fact so idealistic that the student will spend his time wandering around the countryside smelling the flowers and reading books on philosophy'?

I think the answer is that an architectural school can be run as well in the country as it can in the city, and on very much the same lines, if one is so inclined. I hope that no one would be so inclined, but on the contrary that they would realize the opportunities of specialization during this short period in the study of landscape and rural problems. It might be that such a school could be situated near a new town combining another great field of experience.

Under this heading of environment I should also like to say something about the need which I think exists for a much closer liaison between the architectural schools and those of the other arts. In recent years there has been a tendency to believe that if a certain study is regarded as valuable to an architect that subject should be taught in the architectural school. There is no reason why a general liaison between the different schools should not give the architectural student a wider experience without increasing the curriculum.

I would like to sum up what I have said in this second stage of my paper, which has been mainly a plea for greater study of educational, examination and testing techniques and also a plea for every effort to be made to allow the student to spend some of his time in fine surroundings. As I have said I have in mind something in the nature of a country school. I have also pleaded for liaison for other schools studying parallel subjects such as the great centres of design

and painting, and I might add that under this heading I would include contact with schools in other countries where summer schools can be run.

I have been struck in visiting schools in other countries by a tendency in some places to outline a philosophy which is more or less imposed on all students going through that school. This either produces robots or rebellion. It is a rebellion of the worst kind to escape existing rule rather than to establish a new and positive approach.

Students can only be introduced to philosophy, but one can do no more. One can cultivate qualities and principles during the undergraduate days, but, in my own opinion, philosophy is only made personal by experience. It is only when one has built for some time that one can have any certainty about one's architectural philosophy.

I would like to say here how much I have been impressed during my experience of the Board of Architectural Education with its broadmindedness and the way in which it has a place and gives encouragement to such widely differing points of view. I am certain that in the Board, as it works at present, we have a powerful instrument which gives real understanding and help to all heads of schools. If there is anything critical to be said about the Board of Architectural Education it is that its work does not always awaken the interest which it deserves in the general body of the architectural profession.

Nearing my conclusion I would say that the problems as they appear to me, a comparative newcomer to architectural education, are all major problems and they can not be solved by the schools alone. Participation and consideration by the profession as a whole is required if we are to move forward.

I know that many people say that the present times are abnormal and that therefore we should not make any great changes. This is right and proper, but I see no reason why we should delay consideration of these matters and, should we find ourselves bent on some new development, now is the time to prepare our plans so that they can be put into action with the minimum delay when the opportunity presents itself.

I do not think the time is far off when the ex-service men will soon have ceased to swell the numbers in the schools and we will be at our new normal in another four or five years. I would stress that it will be a new normal. It is not a return to anything we have known.

Particularly important is the fact that our planning should be guided by a realization of the importance of real freedom. The new heads of schools must take their chance to experiment and develop. Restrictive supervision by the Board does not exist; but some speak against experiment, arguing that such a course results in the student being treated as a 'guinea pig.' If experiment is excessive it is bad, but the average student today will welcome the idea that his staff, principal, governing body, and the R.I.B.A. Board of Architectural Education are aware of and experimenting with any new thing which may help to make him a better architect.

Finally, one hopes that we are training the architects who are to produce one of the greatest changes in environment which this country has ever seen. We can not do it without the active help of every member of the profession. In this way the profession and the realities of building today can become part of the natural environment of all students and must condition their whole approach to architecture.

I have spoken in this paper about aims and methods in education, my view being that good architecture and the method by which it is taught are indivisible. I would like to close by congratulating all those students here tonight who have gained awards and to wish them every success in the careers which they are starting so well.

DISCUSSION

Mr. Martin S. Briggs [*F*]: I shall begin by telescoping my congratulations to the students with congratulations to Mr. Gordon Brown on the very important appointment which he has taken in Edinburgh, and say how much we regret losing him from London, but that we shall hope to see him at meetings of the Board. We also thank him for the freshness, interest and admirable delivery of the paper which he has read this evening.

On these occasions the discussion is usually opened by a star speaker from outside, who is naturally very careful to be polite to his hosts, and who sometimes indulges in rather airy nothings! On this occasion, I am asked, as Chairman of the Board, to take part in what is really an informal family party, so that any remarks I make in that capacity will be of a purely businesslike nature.

You have heard something about the work of the Board. Mr. Gordon Brown has given us a fairly good mark, which is generous of him because he knows all about it, the worst as well as the best; but I think there is a certain amount of misconception. It is a common belief that we are a gang of old men who exist to obstruct the aspirations of students; I can, however, assure you that not only do we not want to do that, but we could not even if we did, because the Board is a large body of representatives of all kinds of interests, and those representatives are constantly changing. It would be impossible for any one person, unless he had a very compelling personality, to impose his views on the whole of the Board, or for the Board to retain them for long. We are genuinely anxious to welcome fresh ideas, and I can assure you that the honorary officers of the Board—and the honorary work is fairly heavy—are constantly changing, so there is no danger of any extremist getting control of the organization!

Mr. Gordon Brown thinks that there are great changes coming. He speaks of returning to a new normal in four or five years, and that is a fairly reasonable anticipation. He says that we must get ready for it, and I can assure you on behalf of the Board that we should welcome any suggestions, provided only that they are reasonably sane and will work.

The question of standardization of architectural schools, and their control is, of course, a tender point. It is quite impossible under existing conditions for schools to be entirely independent and entirely emancipated. That is partly because of the privilege of exemption in recognized schools, and partly because we are in a registered profession, so we must demand a certain modicum of education and procedure as a condition of recognition but really there is a tremendous amount of rope allowed to the schools.

Liaison with other arts very largely depends on the situation of the school. Some schools are placed in polytechnics, institutes, and sometimes in universities where there are good contacts with the arts. Other schools are entirely independent, but naturally the degree of contact with other arts varies.

Then comes the question of isolation from reality and office experience. I do not know whether you are aware of it, but only a few years ago all the recognized schools included quite a large amount of office experience as an obligatory part of their course. That has lapsed to some extent in certain schools, but the whole question of practical experience is now under consideration by the Board, and you will hear more about it in the future.

I gather that Mr. Gordon Brown does not expect students' technical knowledge always to keep abreast of design problems, and that is an arguable point. I think he said that constructional aspects tended to be linked with design problems, and certainly that is the practice which has been demanded by architectural experts for very many years; but I think he is entirely right in arguing that quite apart from the particular subject upon which the student happens to be working, there should be beyond that some fundamental thinking—what you might call the grammar of design and construction—apart from any particular exercise.

I am also uncertain what he would do in the way of introducing more cultural or general subjects, something in addition to history, in non-university schools. What would he wish to introduce, and how would he obtain a staff for them in non-university schools?

I am not absolutely clear about his objections to the school certificate, and although I do not altogether mean what I am about to suggest, I can not resist saying that I gather from him that he has a very considerable grievance against the boy or girl with five credits! He finds that he or she is lacking in self-confidence and is unstable. I wonder whether he would increase either of those qualities *pro rata* according to the diminishing number of credits; that is to say, the fewer credits you have, the more stability and self-confidence you would possess. It might, in that event, be better to get down to no credits at all!

When it comes to the question of environment, I think that everyone will agree with what Mr. Gordon Brown has said. I

daresay quite a number of you do not know as many architectural schools in the country as I do. In some cases they are in slums or on the verge of slums, and that is not an exaggeration. I shall not mention any names! Apart from the question of environment there is the question of the actual buildings themselves. I know one school which is a converted factory; I know another which is a converted Sunday school, if that is not a contradiction in terms; and I know another which consists of converted Victorian houses, some of which are not as converted as they ought to be! Everything in those buildings is wrong. On the other hand, I must admit that there have been some remarkable examples of transformation, and even if environment is not there, the atmosphere has been enormously improved, which reflects great credit on the heads of those schools.

It is wrong that architectural schools should be in such surroundings, but if you ask why they are put in the middle of big cities, you get the very practical reply that the need of the greatest number of students is to be able to get to school easily, and not waste half the day travelling. I think you will agree with that. Also the difficulty of staffing the schools is greatly increased if they are situated in out-of-the-way places. Staff is difficult to obtain nowadays as it is, and you would not be able to obtain specialists. Again, access to art galleries, museums and buildings of interesting construction is much easier in a centrally placed school, as is contact with architects.

Furthermore, if you have a country school it will cost a good deal of money. I should like to see it, but I cannot visualize how it can be done. Either it will be paid for by the parents of the students, who are already paying very high fees, or it will be paid for out of the rates. If it is to be paid for out of the rates you have to justify it and tell ratepayers what they are paying for. The idea of a country school, although a delightful conception, is difficult at present, and I do feel that quite a lot can be done by students who are enterprising enough to break loose from town schools and make the best of the country on their own in their spare time without any spoonfeeding.

With those few comments on a very interesting paper, I have pleasure in moving a most hearty vote of thanks to Mr. Gordon Brown.

Mr. Thomas E. Scott [*F*]: I am quite sure that we all wish to thank Gordon Brown for his interesting approach to this entertaining subject. I should imagine that no other profession has an educational system which is the subject of so many discussions, reports, and memoranda as is our profession. Indeed, the numbers of suggestions which are proffered to the schools are sometimes rather embarrassing. They come from all sorts of informed quarters—and others! It is therefore, very helpful to have the views of one who can speak from experience but who speaks without that prejudice which even the best of us may acquire after devoting the greater part of our professional lives to teaching.

I agree entirely that any standardization of a system of technique is neither necessary nor desirable. As we have heard from the chairman of the Board and from Mr. Brown, not the least valuable of the principles which govern the work of the Board is that schools are allowed to develop along individual lines, so long as they keep more or less on the rails. At the same time, I think it is a very good thing that each school should know that which is being thought and done in the other schools. I share Mr. Gordon Brown's wish that more could be done to facilitate and encourage the widest possible exchange of ideas, not merely between the heads of schools, but between all members of the staffs.

I think we should all agree also with Mr. Brown that the school system is capable of providing a better training than any other method; but I feel that we, as a body, should do well not to overlook the benefits which office training in a good office may provide. It is of great value to the profession and likewise to those who are trained by those means.

I do not think that we need fear that there will be a revival of articled pupilage which will supplant the school system but, at the same time, I can not imagine a profession without that large and important body of assistants which performs such useful work in the office, and which prepares for qualifying examinations by virtue of studying, what one might call, the hard way. I suggest, therefore, that those of us who are responsible for education should keep this important group of men constantly in mind so that they, too, may benefit from any developments we are able to make in architectural education.

I do not think I share Mr. Brown's views with regard to the quality of entrants to the schools. We all realize, I think, that the school certificate with a string of distinctions and credits may mean anything or it may mean almost nothing at all. It is too much to expect that more than a few entrants to the schools will have any but the very haziest ideas concerning the profession. They will have had very little worth while pre-entry training other than, of course, in the basic subjects of the ordinary secondary school course. After all, most boys and girls give very little thought to their careers until their secondary school education is too far advanced to allow of deviation from the course upon which they have already embarked. I think it is likely that the new regulations governing the school certificate about to be introduced may even create more difficult conditions than those which prevail today. I believe that the schools, and possibly the Institute also, may find it helpful as well as necessary to devise some form of preliminary training which will weed out the unsuitable but prepare the remainder for the more serious studies which are to follow. I am thinking rather on the lines of the first M.B. or pre-medical examination which students of medicine are required to take in the very early stages of their training, and without success in which they are not allowed to proceed. I can imagine the possible advantages of a first year course which includes an adequate amount of general drawing, science, a preliminary study of material, structures, and the basic principles of design and construction as a general background, but most important of all would be carefully considered exercises which help students, and would provide teachers with an opportunity of assessing individual capacities for further study. I have come to regard the first year's course in architecture as possibly the most important stage in the school course, for it is then that the student prepares the foundation upon which to build his career or, alternatively, discovers that nature did not intend him to become an architect.

We probably make considerable misuse of the word 'research' when we really mean investigation or study. The suggestion made by Mr. Gordon Brown that so many forms of specialized study should be relegated to post-graduate courses is very sound. I feel that anything in the nature of research, such as it is generally understood to mean, should certainly be relegated to post-graduate training.

I fear that I am one of those who may have suggested a little time ago that too much experiment might result in the student being a 'guinea pig'; but I said that because I feel so strongly that our fundamental responsibility in the schools is to prepare men and women to deal with the ordinary every day problems of architectural practice. Experiments can, of course, be popular, but unless they are very carefully conceived and seriously accepted, they become more interesting in themselves and their objective is apt to be overlooked.

I do not believe that we are on the brink of a new startling era in architectural education. I believe that we shall continue to make the evolutionary progress in the future that we have made in the past. It is very interesting for those who can to look back upon the changes which took place between the two wars. One recalls those bad old days when students were required to study the Orders making compositions and designs concerning hypothetical matters. It would be very interesting to compare the results of those bad old days with the results of the new methods which are being practised today. The changes which took place in the inter-war years, if we compare one extreme with the other, are really startling, but not startling or revolutionary in their introduction. They were imposed upon the main objective of teaching which was to produce men and women capable of taking their places in the profession, and I believe that such changes will continue to take place.

I strongly support Mr. Brown in his suggestion that there is a very important place in the architectural scheme of things for those who are eminently concerned with the subject of architectural education. I have heard it said that a teacher of architecture is rather looked down upon by his colleagues in the profession. I do not think that I entirely agree with that assertion,

but I do feel, and it is my experience, that the teacher of architecture probably does not enjoy the same degree of status or recognition as the teacher in, say, engineering or the great sciences. If the future of the profession is to any extent to depend upon the training which we give in the schools, then surely by inference the future of the profession is very largely dependent upon the quality of the teachers who are recruited into the profession. It is the earnest desire of all of us who are engaged in architectural education that conditions of status and even financial reward might one day be adjusted, in order that we shall attract the men and the women who are capable of producing the kind of education to which I have referred.

In conclusion may I take this opportunity of congratulating Gordon Brown—I have not become used to calling him Professor Gordon Brown yet—on behalf of his many colleagues in the schools throughout the country, and wishing him every success in his work in Edinburgh together with all that happiness which I know can come to one who takes to architectural education.

Mr. A. H. Mottram [*F*]: May I, as President of the Edinburgh Architectural Association, say how much we shall welcome Mr. Gordon Brown to Edinburgh, how much we look forward to his teaching, and how much the Edinburgh architects will look forward to giving him all the support in their power.

Mr. W. A. Eden [*A*]: I was quite pleased to hear Mr. Gordon Brown make the plea that the subject of architectural education should be thought out again very carefully, and related to experience in teaching in other subjects. Architectural education, as we know it today, has not been going on for very long. There are other subjects which have been taught in schools and universities for a much longer time, and I do think that it is possible to learn something from the way in which those subjects are taught. I hope that Mr. Gordon Brown will be able to use his influence in his new appointment to get something moving in regard to this matter, and I would suggest that there are three important questions which might profitably be enquired into at the present time. Those three questions, quite briefly, are these: whether we are attempting to train too many people in our schools at the present time; secondly, whether our courses as school courses are not too long; and, thirdly, whether those courses are not too crammed. I suggest that those three questions should be considered very carefully at the present time.

On the question of environment I consider it would be a very bad thing to take schools of architecture away and put them in the depths of the country. They need to be in contact with life and people; that is essential. You can not learn much about architecture from contemplating cows.

I think it is generally agreed that a student who has done five years at a school of architecture is not fully equipped as an architect and can not be. The important questions seems to me to be this. Is it possible, in a school of architecture alone, to prepare the student for practice? I personally do not think it is, and I think that one of the great mistakes we are making is in trying to do too much in that way.

Mr. R. Cowan [*A*]: Since I am from the Edinburgh School of Architecture, I feel I must not say anything too critical of Mr. Gordon Brown in case it may spoil what I am sure will be a happy and pleasurable relationship.

There are two well-defined opinions as to the purpose and nature of architectural education. On the one hand you have the opinion of perhaps most practising architects that the student coming out of the school should be an eminently practical person suitable as an assistant in the office, and on the other hand there is the point of view, which is perhaps more germane to the opinion of the school itself, that the student turned out should be a person who is a competent designer. A great deal of the difficulties which schools find in their training, and part of the reason why the curriculum is so crowded, is this fact that schools do attempt, as best they can, to reconcile those two divergent viewpoints. It would appear on the face of it that it might be better if they recognized frankly that there are two different requirements, and possibly institute two sequential methods of training. It may allow the cramming of curricula to be eased if we recognize as a first stage that graduates should be men who can take their place in the very important day-to-day work of creating a good environment, which is the job of architects. We must have post-graduates who can go on and do this extra study.

Some incentive or recognition of this post-graduate study should be given. I would, for instance, suggest some higher degree; some degree of master designer in architecture, so that post-graduates could really become creators in the body of architects. I am not suggesting that a small body of superior beings should be created. These post-graduate courses would, of course, be open to anyone to take at any time; but I am making the plea for a dual degree and some recognition of extra post-graduate study.

Mr. P. Johnson-Marshall [*A*]: With regard to the problem of the entrant in the secondary school of education, it seems to me that there is room under the existing secondary educational system for a course in between the matriculation and the commencement of the first year of a special type which might cover not only architecture, but associated studies in science and the arts and thereby prepare students by giving them a proper basis. It might be a course of, perhaps, not more than one year which could be handled by existing technical schools.

With regard to the question of contact with other arts, I would suggest that not only should students of architecture get contact with other arts, but also with other techniques. In that connection I should like to draw your attention to the syllabus by which architects were trained in the 17th century in France. Their curriculum was based on very broad lines, and included such subjects as bridge construction and even astronomy. I am not suggesting that we should fill our syllabus of architecture in this way, but I do suggest that we should bear in mind that today we have, as Mr. Gordon Brown pointed out, some very revolutionary changes in the whole structure of the building industry, using that word in the widest sense.

It seems to me that in schools of architecture we have not a wide enough form of organization. I would suggest that Mr. Gordon Brown examines existing faculties of engineering and science in the universities as they have grown up over the last hundred years, and see how engineering began with simple engineering and spread out as the field of industry developed into many forms. I would suggest that Mr. Gordon Brown might consider thinking about architectural education, not merely in the narrow confines of the schools of architecture, but in a wider faculty, rather in the same form as faculties of engineering.

Mr. D. H. McMorran [*F*]: I should like to go back to what Mr. Eden said, because I think he gave us some food for thought. I like his criticism of the idea of the country schools. Mr. Gordon Brown seems to have a picture of students reading poetry and picking flowers, and while I do feel that a school of that kind, in a nice country house, would be very pleasant, you would have a little set of 'æsthetes' completely cut off from the rural life around, and I think it would be a terrible thing. The only advantage I can see would be that they would have more opportunity for measuring and sketching, which does seem to me to be a great shortcoming of the present-day student. We get people coming into the office for jobs, and they bring the most wonderful designs and town planning studies, and so forth, but when you ask them whether they have done any sketching or measuring, they simply stand and gape at you. I may sound old fashioned, but I do think there is merit in that sort of study, and in that connection a country school would be of great convenience to the student. Surely, the good assistant becomes the good architect?

Mr. R. E. Enthoven [*F*] (President of the Architectural Association): May I add my tribute to Mr. Gordon Brown for his very realistic approach to this subject? Most of us, when we have seen in the papers remarks concerning pressure cooking, have thought of what is happening in architectural education, and have wondered whether architectural vitamins are really being retained. Mr. Gordon Brown has stated very clearly tonight what he thinks is the solution, and I think he has answered what Mr. McMorran has just said, namely, that the right way to train an architect in the school is to put him on the right path from the point of view of cultural background, give him office training, and turn him out as a useful assistant who should very quickly

develop on his own into a sound practitioner.

Mr. Gordon Brown has put some of his methods into practice at the A.A. School, and we are all very sorry that he is now going to leave us. We console ourselves with the thought that although he is being translated in body to Edinburgh, he will still be with us, we hope, in spirit.

Mr. A. B. Knapp-Fisher [*F*]: I am one of those irritatingly boastful people who, in good company with others such as Mr. Winston Churchill and Lord Baden-Powell, never did much at school, and I doubt whether, if there had been a school certificate in my time, I should have passed it, let alone get five credits! However, since those times education seems to have dogged my footsteps right up to the time when I was Chairman of the Board of Architectural Education, and I should like in the next three minutes—it is difficult in three minutes to discuss a subject which has been discussed for thousands of years past and which will be discussed for many thousands of years to come—to deal with three points.

First of all, it goes without saying that great importance should be attached to the ability and understanding of the masters and teachers. At the same time students should also, as no doubt in many instances they do, co-operate with the masters. If the students give all their attention, and if they have an overriding desire to learn, to co-operate, and have confidence in their masters, then those two factors together, the good master and the good student, co-operating and understanding each other, will make a very good school wherever it is located. I believe that those are two basic essentials, and I think I am right in saying that it is important to urge upon students the need for that co-operation, and to assure them that there is a desire to co-operate with them on the part of the masters and officials of the Board.

I do agree that there should be a simplification of the curriculum rather than an elaboration of it. The golden rule is to master the rudiments of one's trade, and I am sure that if one could pay rather more attention to the first year and could perfect the whole study right through plan, construction and design, then you would do the bigger jobs and the more spectacular work very much better. It is not so much what you do but how you do it. You must start with elementary work and avoid over-reaching yourself too early which, I am sure, is a danger today.

Mr. Gordon Brown is obviously a man of vision, and we know that those who have no vision perish. He has also courage and a creative mind, and I am sure we all desire to give him our blessing as the person who is to sit in that Chair in Edinburgh, and to wish him all good luck. If the average student today can not do fairly well at the average recognized school in Great Britain and the Dominions, then from my own knowledge I would say that there is something wrong, and that it is not the school which is at fault. However, we do want the fresh breezes from Mr. Gordon Brown and others to blow across our curricula and make them more up to date. I do pay tribute to the masters and principals of our recognized schools for the knowledge, keenness and energy which they bring to their work, and I know that they will take the opportunity of keeping abreast of themselves, having listened to Mr. Gordon Brown and others, in the great subject of architectural education.

Mr. G. B. Oddie [*A*]: A lot has been said tonight about the conflicting claims of the office and the other claims of design or duty or whatever you like to call it. I think that reflects the dilemma in which the world finds itself in a conflict between spiritual and material values, a conflict between beauty and utility. I think that the aim of architectural education, treated broadly, should be to reconcile those two conflicts by making the technician who will provide the material and environment also sensitive. Although I do not know at all how it will be done—that is the job of the teacher—I would suggest that the aim should be to make the graduate of the school of architecture an absolutely first rate technician, and leave the philosophy of design to his own development.

I think Mr. Gordon Brown has been unduly criticized for his views concerning the country school. Our environment is too urban and not sufficiently urbane. I do not think that Mr. Gordon Brown has been fully understood, because I believe his suggestion is really that only a period should be spent at the country school.

If you produce a man who is a first rate technician with a great deal of sensitivity, he may not be a first class assistant in an office, and here I think we should do well to stop drawing comparisons with the medical profession, and draw one instead with military organizations where a man, after academic training, becomes a second lieutenant and it takes some time for him to become a colonel. The whole point is, I think, that the assistant is apt to be regarded by the profession as very much the under dog. I think the same thing happens to the second lieutenant, but, at the same time, he is a member of the same mess as the other people and does have the feeling that he is working in a team.

Professor Gordon Brown: I seem to have gone adrift on one or two points upon which I have not been understood. First of all, with regard to the point raised by Mr. Briggs, I did not mean that subjects should not be related to technical lectures. Some subjects involve a much bigger technical problem than others, and I was pleading that where you get a big subject in the fourth and fifth year, you should be careful to control it, also the amount of time students ought to spend on it.

I seem to have done well on the question of the school certificate! My point was that it is an examination which a lot of people take on leaving school, and do not have any other form of education at all. The reason for my criticism of it is that students who have taken it are completely unaware about matters connected with visual arts.

I am not worried about the quality of entrants, but I am very worried about what they have learned so far. I think that a basic course is necessary which has nothing to do with architecture, but which deals with general education, and I think the place for general education is the secondary school.

As to Mr. Briggs' point about paying for any extra school such as a country school, and what reason we should give the ratepayers, I should say that it is the minimum which is required for reasonable education.

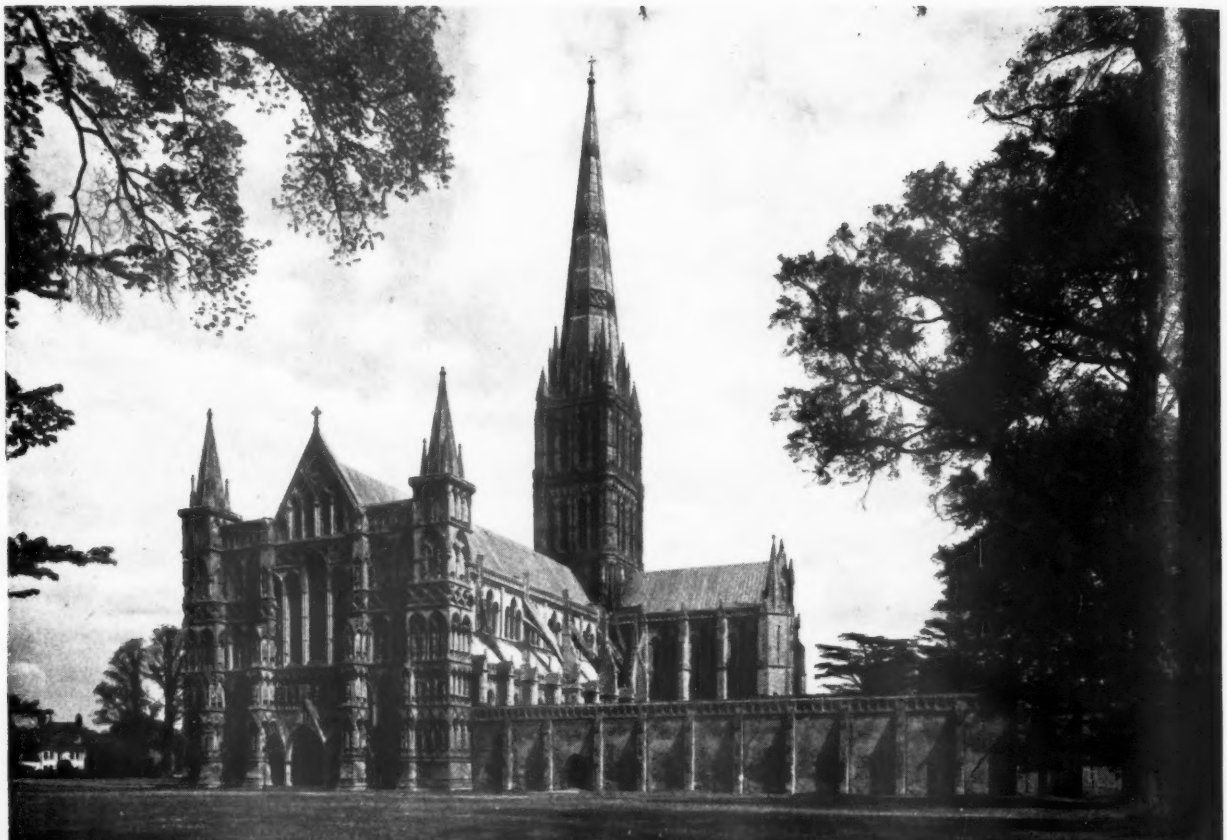
I agree with many of the things Mr. Scott said, but I do not agree with him when he says we are not facing a new era of education. I feel certain that we are, and as a parallel I think that the inter-war period is unfortunate, because if you take what happened before the Kaiser war and after, there was a fundamental change in the whole form of education in this country. There is a change in the conception of how people should be trained, and I think that it is inevitable that we shall get an equally big change in the next few years.

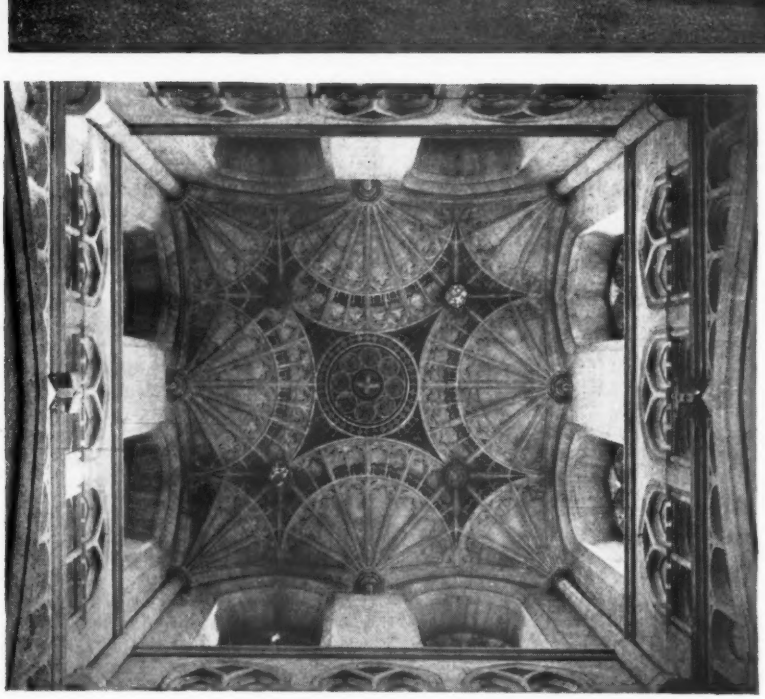
I am sorry Mr. Eden does not like my country school. It was, of course, intended only for a short period of study. The student would not be there the whole time.

I was very interested in what Mr. Marshall said, and I am certain that he was right when he said that one has to be very much aware of what has happened in faculties of engineering.

When I came here I was convinced that someone would suggest that a new subject should be introduced which is not at present included in the course. That is almost inevitable whenever there is any discussion on architectural education, and I am rather surprised that nobody has raised the point.

I do not think I could have made myself clear with regard to the question of assistants and architects. A lot of people want good assistants first and foremost, and the good assistant is the person whom you can train. You can lay out a sort of procedure which will produce a good assistant at the end of it. I think that students who come to the schools do not want to be turned into assistants. They want to be educated as architects, and I think we should concentrate on a broadly based first-class education to fit the young architect to take his place in the profession.





Above: Salisbury Cathedral. Left: the vaulting of the crossing in Canterbury Cathedral

The Architectural Photographs of Herbert Felton

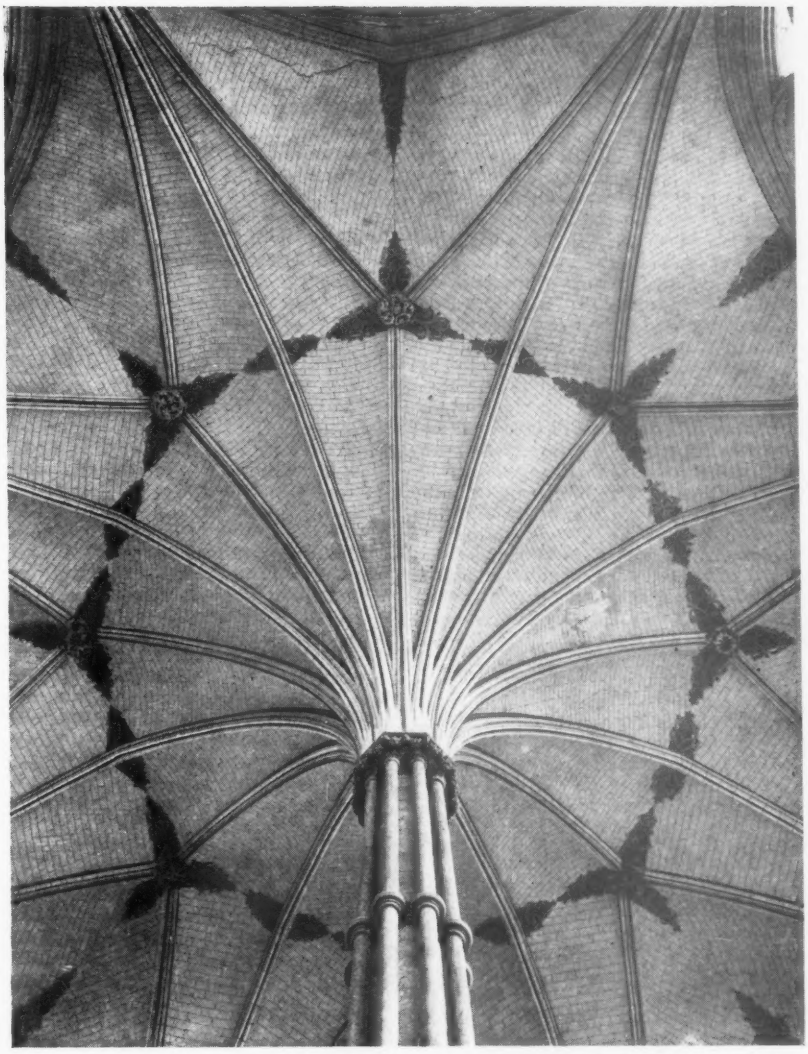
THE PHOTOGRAPHS on these two pages are by Herbert Felton, whose work has been looked at by readers of architectural journals for many years, usually without their being aware that it is his. Among his work for the R.I.B.A. were the photographs of the R.I.B.A. building taken at the time of its opening, and published in the Centenary JOURNAL. He is now engaged mainly on photographing churches for the National Buildings Record, and the pictures we give are mostly from this recent work.

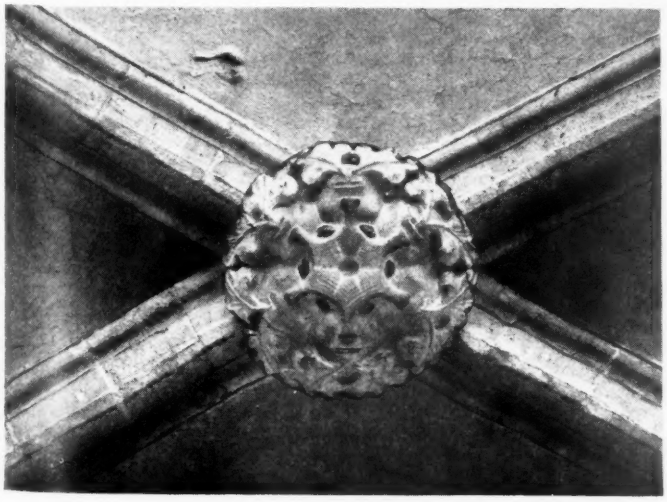
The occasion which has prompted our publication of these photographs is an exhibition at the Royal Photographic Society, 16 Princes Gate, S.W.7, of the combined work of Roger Fenton (1850) and Herbert Felton (1949). The work of the two men makes an extremely interesting

A foliated capital in the chapter house, Southwell Cathedral

comparison and, as said Sir Eric Maclagan [*Hon. A*], when he opened the exhibition, there is a lack of controversy between the old and the new which, compared with painting, is very refreshing.

Fenton drove a caravan dark room round the Crimean war when he served as the first war photographer, a dark room on the spot being a necessity in the days of wet plates. His work shown at the R.P.S. Exhibition is, however, almost solely architectural and includes buildings that were also photographed last year by Herbert Felton, notably Salisbury Cathedral. Technically, Fenton's work had not, and could not have the range given by modern processes, but this is counterbalanced by an immense care in composition; the viewpoints and conditions of light were most carefully studied and figures placed with a charming precision.





Above: Vaulting and the central column of Salisbury Cathedral chapter house. Left: 6 heads, 6 eyes, 6 mouths and 6 noses; a boss in the south ambulatory of Chichester Cathedral

Felton's work, apart from its technical excellence and its skill in composition, shows a quality which is extremely rare with professional photographers who try to photograph architecture. That quality is appreciation of the main object of interest and concentration upon it. For this both an understanding of architecture and experienced judgement are necessary. Felton in his work is really *recording* architecture. The absence of figures is deliberate because they are a distraction from the architecture, so that his photographs may be said to be for the understanding student of architecture rather than for the layman in search of the picturesque. But what superb and sensitive records they are! The full flowing power of Gothic architecture is in that lovely view of the central column vaulting of Salisbury chapter house; and incidentally how does he avoid the distortion which ninety-nine men out of a hundred would get at such an angle? An artist's perception and an understanding of his subject are the prime need of an architectural photographer; first class lenses and darkroom equipment are secondary. E. L. B.

Timber Preservation

By E. H. Nevard, B.Sc.Eng.

THERE IS AMPLE EVIDENCE to show that the ancients realized that most timber was subject to attack by decay and by insects, and that they often carried out some form of preservation treatment. In early days, preservative treatment consisted mainly of a brushed daub of extracts from trees and plants, of bitumen, tar or some other natural deposit. Pliny the Elder, records that a preservative—amurca—was obtained from olives, that nard was distilled from valeriana, and that other oils originated from cedar, larch and juniper. He also mentions that the statue of Zeus at Olympus was preserved by pouring nard into small holes drilled in the base.

Those past masters of preservation, the Egyptians, commonly used natrum, which is now supposed to have been a natural combination of sodium carbonate, sodium chloride, and sodium sulphate, found in the desert. The use of natrum was often followed by applications of tar and bitumen. Many were the theories advanced, often with the backing of 'mumbo-jumbo', to account for the processes used, but always the cause of decay was unknown. Not until the early part of the 18th century A.D. was any serious research carried out on the reasons for decay. It is astounding to realize that such eminent scientists as Dr. Priestley thought that putrefaction and decay were due to the escape from the timber or other material of an imaginary substance which was called 'phlogiston'.

Up to 1850 it was claimed that decay was caused by a form of slow combustion and that infection spread by communication of some extraordinary molecular motion. It was denied that fungus was responsible, but was admitted that moisture, air and infection were necessary. Even at the beginning of the present century, the true cause of decay was still in doubt, and it is only in the last few decades that wood-destroying fungi were isolated and the method of their propagation and growth fully explained.

Development of preservatives: In spite of the lack of knowledge of the true nature of decay, eminent scientists and engineers, during the last 200 years or so, developed forms of preservatives and preservative methods. A Frenchman, Duhamel de Monceau, produced a book—*Transportation du Bois*—in 1765, and mentioned the girdling of oak to prolong its life against insect and fungal attack. He did not realize however, the reasons why it was effective—that by this means the natural food of fungi and insects was removed from the sapwood.

From 1768 until the present time the Patent Office have had a succession of patents covering the use of chemicals and other substances to preserve timber. Two years from this date, Sir John Pringle gave a list of 'antiseptics', but some of these have since been found to be injurious to timber. The eminent scientist, Sir Humphrey Davy, suggested in 1824 that corrosive sublimate should be used; this was not a new preservative since it had been tried over 100 years earlier in France by Homburg, and later had been experimented with in Holland as a preventive of teredo attack. This same chemical, otherwise known as bichloride of mercury, was the subject of a patent in 1832 by a Mr. J. H. Kyan, and its use has persisted to the present time, although in a decreasing amount because of its corrosive action on metals. About the same time, chemical salts of copper, iron and zinc were used by Mr. Thomas Wade.

With the growth in this country of the railway system which called for wooden sleepers to support the track, it was soon realized that some treatment of wood was essential. A mixture of corrosive sublimate, zinc chloride and copper sulphate, was tried and this was followed by treatment with a heavy tar oil. Burnettizing, a process using zinc chloride, patented in 1838 by Sir William Burnett, was at one time used extensively on the French railways and was used up to the beginning of this century in Holland and Germany. Zinc chloride is a good preservative but suffers from a great disadvantage in being extremely soluble in water, and treated timber is subject to leaching. Copper sulphate, another of the early preservatives, is still sometimes used, particularly in France, but only now to a very limited extent.

Methods of application: With the increased use of preservatives, more attention was also being paid to the other big factor, namely, method of application. We have already noted that the ancients commonly used a brush with which to apply the protective substance. During the 18th and the early 19th century, steeping or prolonged soaking became the vogue. The first intimation of the use of pressure treatment was in France in 1831 when a vertical retort in which the timber, immersed in a mixture of linseed oil and resin, was used to carry out a vacuum and pressure treatment. The principles of this method were used and developed in England by such men as Bethel and Burt. Just over 30 years after the introduction of a pressure method, a Mr. Boulton used pressures up to 200 lb. per sq. in. to impregnate timber with copper sulphate. Since then, this method has been slightly modified but it is essentially the basis of present day pressure impregnation. Other methods, grandiosely termed 'Vapour Injection' methods, were tried about the same time, but without success though not without some disastrous explosions.

A sap displacement method evolved by a Dr. Boucherie was initially used for the treatment of freshly felled saplings with copper sulphate. The same method is still in vogue today, particularly in Finland, where the copper sulphate is replaced by 'Tanalith', a modern water-soluble preservative.

Growth of fungi: The idea of preserving timber against decay and insects is, therefore, not new. At the present time, most people are aware that rot in wood is caused by the action of a fungus which feeds on the cellular structure of the wood and on the cellulose, starches and sugars that it contains. It is generally realized that these fungi, growing to maturity, develop seeds or spores which, dispersed by the wind or carried around on infected timber or on people's clothes, can create a new fungal growth on suitable materials such as wood. Our mycologists have found that the other essentials of fungal growth are air, moisture and normal temperatures such as are found under everyday working conditions. They have stated that if any one of these requirements is lacking or if the wood is treated with a fungicidal composition, not only will the spread of infection be inhibited but the fungus will die.

Decay of timber in a building cannot be prevented in practice by withholding the air or even by controlling the temperature, and, therefore, the only practical methods are to use dry timber, and at the same time keep it dry, or else treat the timber with a preservative. At the present time it is unfortunately true that a lot of timber used is far wetter than it should be for good building practice, and, therefore, the only resource left is to apply a fungicide.

Modern preservatives: Modern preservatives may be classified into three types:
(*a*) the tar oil type, which includes creosote, a much abused and generalized term applied to a number of derivatives from the destructive distillation of coal, and also the many patented forms of creosote in solvents which are so familiar to the using public,
(*b*) the solvent type, which are chemicals dissolved in an oil or spirit solvent to assist easy application, and
(*c*) the water-soluble type of preservatives which are toxic chemicals dissolved in water.

Each of these classes of preservatives has its own peculiar characteristics. Creosote is an excellent preservative but should be limited to those uses in the open air where its smell does not become too noticeable. If used in a house, it will be found that its smell often makes people ill, and also that our present meagre rations of fats, whether lard or butter, will become permeated with the flavour of creosote. Because of its oily nature, it is liable to spread from the timber into the plaster and cause unsightly stains unless special precautions are taken.

Treatment with the solvent types of preservatives, because of the volatile nature of the oils and spirits used, is limited to brush application and they are not suitable for pressure treatment. Because of this characteristic which limits the depth of penetration, they should only be used in those situations where the risk of decay is relatively small or where pressure treatment is impossible.

Water soluble preservatives are most suited to obtain deep impregnation of the timber by pressure methods. This third type covers a large number of chemical compositions, ranging from those which can be bought in any chemist's to others which are manufactured and supplied by firms who specialize in preservation, and whose products are protected by patents. The advantage of using timber treated by specialist firms ensures that the optimum protection is given. Initial cost may be greater, but this must be offset against a guaranteed impregnation and consequent freedom from decay. At least one preserving firm in this country maintains small stocks of treated timber in the yards of about 100 timber merchants scattered in the main using areas —these are primarily for use in small dry rot repair jobs for which maximum protection is required.

It is characteristic of all preservatives that any one chemical will be effective against only a limited number of fungi, of which there are many different species. In order to obtain complete protection against any fungus that may be encountered, it is therefore necessary to use a combination of chemicals so that those fungi which are resistant to some of the chemicals will be killed off by the others. Another fundamental requirement of any preservative is that the results of the treatment should be permanent—this prohibits the use of volatile substances. Any chemical which is corrosive to metals or which causes a breakdown in the tissue of the timber would also be of no use. The ideal preservative should cover all these points and also have such other attributes as freedom from smell; it should be safe to handle, and the treated timber should have no effect on the workmen who cut and machine it. The treated wood should have no deleterious action on paint or other surface finishes. Cost of the preservative is a vital consideration and with this must be considered whether the preservative can be transported in concentrated or solid form. Obviously the constituent parts of the preservative should be readily obtainable.

Having chosen a suitable preservative, the next point is to consider the method of application. Eminent research scientists have agreed that *no wood preservative applied as a surface coating, however toxic or efficient it may be, can give permanent protection to timber where the decay hazard is at all serious.* It is, therefore, the aim of every firm of integrity in the preserving industry to obtain as deep a penetration as possible.

Methods of applying wood preservatives: Modern preservatives are usually applied by means of the two following methods:—
(1) surface treatment by brushing, spraying or dipping, and
(2) pressure processes by which the preservative liquid is forced into the cells of the wood by carefully controlled pressure treatment.

The first method of treating the surface is suitable for timbers that are required to have only a very limited life, or where the decay hazard is due only to temporarily damp conditions. If cost of maintenance is of no object, they might even be suitable in places where timber normally decays, but in such cases yearly applications might be essential. Surface treatments are quite unsuitable for timber which is in contact with the ground, embedded in concrete or partially immersed in water. In assessing the cost of any surface treatment, account must be taken not only of the amount of the preservative that is used on the wood, but also of the 'spillage' that is lost on to the adjoining ground by splashes or by drips—this 'spillage' is not the negligible amount that most people imagine.

Surface treatment of timber usually requires a preservative of the solvent type which by virtue of the solvent tends to permeate into the timber to give slightly more protection than would be given by a water-soluble preservative used in this manner.

Impregnation of timber by pressure methods is essential where the risk of decay is high. Pressure treatment should always be specified with water soluble preservatives and except in exceptional cases, should also be used with creosote. The methods of treatment for these two types are slightly different, although the plant that is necessary is essentially the same. In order to economize in creosote and to avoid excessive bleeding of the oil from the treated wood, it is usual to use what is termed the 'empty cell' process. On completion of this process, the cells of the timber are coated with creosote but the cells or the air spaces in the wood are empty.

With water soluble chemicals, the 'Full cell' process is commonly used, and in this case the cells of the timber are left with a substantial quantity of the salt solution in the cells after treatment. When the timber is subsequently dried, the water from the solution is abstracted leaving a high concentration of the toxic chemicals on the cell walls and in the cell spaces.

It is not generally realized by architects that wood may weigh anything from 3 lb. per cu. ft. to about 80 lb. per cu. ft. depending on the species. If it were possible to obtain a cu. ft. of solid wood fibre it would weigh approximately 91 lb. per cu. ft. It will be appreciated, therefore, that in most timbers there is a large proportion of air. This proportion will greatly influence the maximum volume of preservative that it is possible to impregnate into the timber. The weight per cubic foot or specific gravity of any timber gives, however, only an indication of the maximum amount of preservative that could be absorbed if the timber were completely impregnated. Complete impregnation of *all* heartwood and sapwood is possible only with a very limited number of species whatever the preservative and whichever method of application is used. Even amongst specialists in preservation, the actual mechanism of impregnation is not yet fully understood. It is hardly surprising, therefore, that people meeting with pressure impregnated wood for the first time may in some cases be disappointed with the relatively small amount which can be absorbed. In general, the sapwood of a timber can be treated very much easier than the heartwood. This is fortunate, since the sapwood contains more of the sugars and starches that are essential to the life of the fungi. Beech, a hardwood, is relatively easy to impregnate, but Douglas fir, a softwood, is one of the most difficult timbers that the treating plants encounter. Neither of these timbers is naturally durable, and it is, therefore, necessary in the case of the Douglas fir to increase the protection by artificially inducing small splits in the timber by means of knives forced into the wood. This process, known as incising, enables the preservative to be absorbed into the timber to a greater depth than would be possible by other means, but fortunately, it is only required where the decay hazard is relatively high. The strength or concentration of a water soluble preservative can be varied as required to suit the characteristics of the timber and to leave in the timber a quantity of the toxic salts that will be adequate to the severity of the decay hazard.

A few timbers are naturally resistant to decay, because of the presence of toxic chemicals in the wood. This was found, as mentioned before, by the ancients, who distilled their preservatives from trees and plants. Nature, however, only supplied this protection where the risk of fungal attack was most likely. For this reason, western red cedar, for which it is often claimed that treatment is unnecessary, sometimes has its excellent reputation besmirched by some pieces which decay. In any one tree of this timber, pieces will be found that are very highly resistant to fungi, whereas others are no more resistant than our familiar baltic redwood.

Need for preservation: Some people have suggested that all timbers should be preserved. This cannot be denied, but the method used should be appropriate to the risk of decay. The general interpretation of preservation is *any* means by which rot in timber can be avoided. Using dry timber in a good form of construction that obviates the incidence of excess moisture is the easiest method, but this must be supported by good workmanship and adequate maintenance. Where there is only a slight risk of the wood becoming rotten, then a surface brushing with a preservative will probably be adequate. Timber in contact with the ground, in places where the moisture content can rise for any length of time above 20 per cent should be pressure treated. Maximum protection should also be given to any timber in proximity to any known sources of wood destroying fungi, e.g. where decayed timber is replaced. The greater the decay hazard, the greater is the penetration required of the preservative into the timber to ensure that it will have the longest possible life. Only by such treatment can the present meagre supplies of our most valuable building material be conserved, and the most efficient utilization obtained.

The Post-Reformation Kirks of Scotland

By Andrew L. Drummond, Ph.D., F.R.I.A.S.

THE LATE Professor Ian Hannah regretted that 'Presbyterian Scotland, unlike Reformed Holland and Puritan New England, has evolved no religious art of any kind'. This generalization calls for qualification. Mr. George Hay [*A*] is now surveying Scotland from Caithness to the Borders, measuring and photographing kirks (1560-1843). When he presents results, his *magnum opus* is sure to be a landmark in the revaluation of a neglected heritage. There will no longer be any excuse for uninformed criticism of 'barnlike kirks'—so long a target for ecclesiologists, romanticists and Calvinist-baiters. Unfortunately, many old sanctuaries of marked individuality have lost their architectural interest in the last 70 years through the combined operations of crass utilitarians and Gothic Revivalists.

The Church of Scotland was largely stripped of her endowments by crown and aristocracy at the Reformation. Knox tried to save as much as possible, but only managed to secure a bare maintenance for the Reformed régime.[1] Landowners were responsible for the payment of stipend and the upkeep of kirk and manse in each parish. Had these 'heritors' taken as much interest in ecclesiastical fabrics as in their own mansions and stables there would have been less cause for complaint at 'barnlike kirks'. Modern lairds are apt to blame Presbyterianism instead of the parsimony of their own forebears. Scotland was devastated again and again by civil war, intensified by Stuart interference, and did not recover till long after the '45 Rebellion. A large section of the governing class was Episcopal in sympathy, and the majority of the people were miserably poor.[2]

In the burghs, oligarchies usually controlled church fabrics and tended to be penurious. Yet the first town kirk to be erected after the Reformation, Burntisland (1592), is well-wrought. It reminds one of a Dutch church,[3] standing four-square on a hill-top. It is in the form of a Greek cross, the main feature being four massive piers carrying round arches (and supporting the 18th century central tower). Only corner buttresses suggest the Gothic tradition. Despite its four galleries the interior is impressive as well as cheerful. Yet this fine old parish church was neglected by antiquarians because the windows were square and it lacked the mediæval flavour. At last in 1907 Sir Rowand Anderson restored the features that had once fitly symbolized the community sense of a seaport and a royal burgh. The gallery fronts are emblazoned with the insignia of the guilds and crafts; there is a 'sailor's loft' and a richly decorated magistrates' pew.[4]

St. Columba's Parish Church, Burntisland, Fife. General view, elevation and section. Reproduced by permission of the Kirk Session

It is a pity that the Burntisland model was not more generally followed in the Church of Scotland. Few new churches, however, were required during the 16th and 17th centuries. Mediæval kirks were adapted to Reformed worship, with little respect for anything but acoustics. When the worst has been said about 'iconoclasm', it must be admitted that the Scots were sincere in honest 'functionalism'; they made no attempt to follow ecclesiological tradition when it conflicted with their ideals of congregational worship. Considering that Gothic was 'barbarous' to the classic taste of Catholic Europe for several centuries after the Reformation, one can understand that the Scottish Presbyterians would have little interest in an architectural style so lightly esteemed, and, moreover, associated in symbolism with the very doctrines they rejected. Mediæval tradition, however, persisted in the bold use of the church tower, e.g. Anstruther Easter (1650) with gabled stairhead, parapet and spire in the Fife manner. 'Survival Gothic' continued during the 17th century—characterized by pointed windows, interlacing tracery, buttresses, sturdy pillars and arches.[5] One thinks of historic Greyfriars, Edinburgh (1614)—a rather dull 'restored' interior

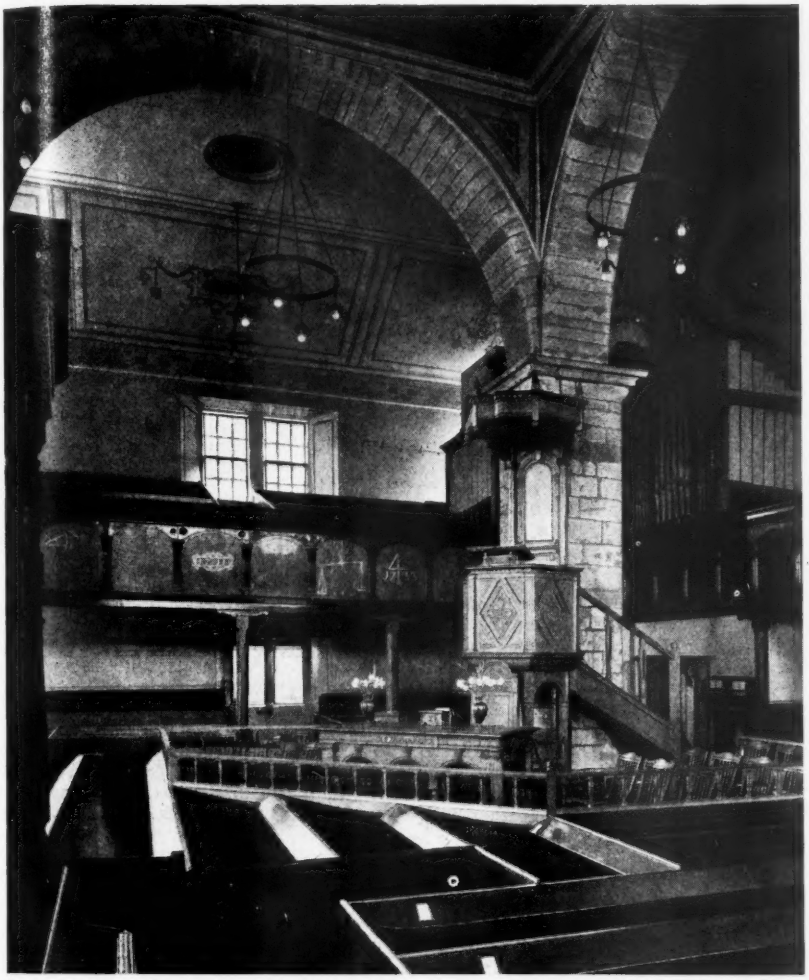
[1] P. D. Thomson, *Parish and Parish Church*. (Nelson, 1948.) Esp. Ch. X.

[2] For an exposure of the 'blight of Calvinism' myth, see Dr. Mary Ramsay, *Calvin and Art, considered in relation to Scotland*. (Moray Press, Edinburgh, 1938.)

[3] *Cp.* M. D. Ozinga, *De Protestantsche Kerkenbouw in Nederland*. (Amsterdam, 1929.)

[4] Scottish Ecclesiological Society *Transactions*, 1886, p. 20; 1893, p. 36; 1924, p. 71.

[5] *Cp.* McGibbon & Ross, *Eccles. Arch. of Scotland*; *Castellated & Domestic Arch. of Scotland*.



Interior of St. Columba's Burntisland. In 1601 James VI indicated here his intention to have made a new Bible translation (the Authorized Version). Reproduced by permission of the Kirk Session

with aisles but no clerestory; or of Ayr kirk, erected during the Commonwealth yet distinquished by transepts, a steep roof and lancets.

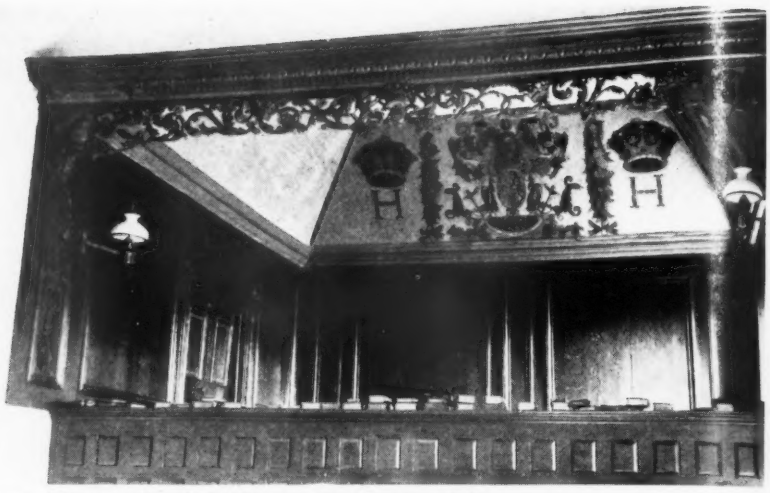
The Episcopal party did their best to keep Gothic alive. Archbishop Spottiswoode at his own expense built in 1621 a model country church at Dairsie (near Cupar, Fife). It is a curious little ashlar rectangle, uniformly marked out by buttresses, with plate-tracery windows; the corbelling on the turret at the S.W. angle is reminiscent of a castle like Fyvvie or Glamis. A screen originally divided 'the bodie of the kirk fra the queir, as ordinarily called in papistrie'; but this, with 'sundry deskis' was demolished by order of the General Assembly, among other 'Monuments of Superstition' (1648). Most Gothic churches of the 17th century have Renaissance detail in belfry, balustrade and doorway. The Tron Kirk, Edinburgh, consecrated during Laud's brief ascendancy (1637), has buttresses in the form of panelled and fluted Ionic pilasters, while the round-arched windows are filled with 'Gothick' tracery. Street widening in 1785 and the loss of the copper-covered Dutch steeple in the fire of 1824 has deprived the Tron of most of its charm. Dutch influence was potent along the east coast (though claims to be copies of churches in Holland can not be substantiated). The ogee gable of the Canongate Kirk, Edinburgh, built just before the Revolution of 1688, might have come straight from the Netherlands. Gothic vestiges give way to large round-headed windows, which, with the roof, give the building a somewhat secular feeling, although it is cruciform. After suffering much from harsh utilitarianism, the historic Canongate Kirk is in process of being restored by Mr. Ian G. Lindsay [*F*] and colleagues.

In rural districts vernacular Gothic lingered after the re-establishment of Presbyterianism in 1688. In a sequestered corner of Berwickshire there is a pleasant example of this at Polwarth. A large ivy-grown tower with a slated cap forms the 'west end' of a modest little kirk with slightly pointed windows and a steep roof. It was rebuilt in 1703 by Sir Patrick Hume, a Covenanter; the pulpit valance is the work of his daughter, Lady Grizel, who fed her father secretly in the family vault when he was an outlaw. Non-Covenanting relics are Laudian Communion rails (the only specimens in existence north of the Border); these thirty-eight well-turned posts, 3 ft. high, were preserved through being utilized as the front of the Marchmont pew. A 'renovation' in 1928 exposed the rubble of the walls, which, of course, were meant to be plastered; the mystic quest for a 'stone interior' (whatever the kind of stone) seems to haunt even the present generation of 'restorers'.

Another instance of 'Survival Gothic' is Glencorse among the Pentlands. Against a leafy background in an ancient churchyard rises a crow-step gable above a rose window filled with coiling tracery. String courses, panels and roll-moulding maintain a distinctive Scots tradition; and a Gothic spirit blends perfectly with simple Renascence detail. Glencorse Kirk was built in 1699, and has many associations with Robert Louis Stevenson. Since his day it has become a romantic ruin. Like many of the abandoned churches of its type, it would probably have accommodated the parishioners adequately today. Too many charming country churches were replaced during the Victorian era by soulless Gothic Revival edifices, that are now too large for a diminished band of regular worshippers. A case in point is Tulliallan (Kincardine-on-Forth). In this country parish a fair-sized 'Survival Gothic' church of 1677 was needlessly vacated before 1843, in favour of an enormous galleried preaching house in stylish Perpendicular.

By the middle of the 17th century the Latin cross as ground plan had given way to the Greek Cross, or the T-shape. Lauder church, Berwickshire (1673), built while Lord Lauderdale was harrying the Covenanters, belongs to the former type. It is a homely 'harled' building, with a central tower, square up to the ridge of the main roofs, then octagonal, and finished with a slated roof rising to a point. Each of the four arms (28 ft. 6 in. by 16 ft. internally) is filled with a gallery and lighted by square windows below and pointed windows above (mullions, transoms and plain, intersecting tracery); there is clear glass throughout. Lauder Kirk has individuality; it suits an old-world Scots village; it is certainly not 'barn-like', and in Mr. Hope Bagenal's phrase is 'an excellent auditory type'.

The T-plan in Scotland tended to displace the Greek cross for practical reasons. At the Reformation the disused chancel was appropriated by the laird, while other heritors followed his example by erecting 'lafts' in the transepts. As in Holland, the congregation gathered round the preacher on three sides, the pulpit standing halfway down the nave. For the Lord's Supper a long table would be placed from one end of the church to the other, at which the communicants would be seated in detach-



Above: Abercorn Church, Linlithgow. The Hopetoun loft.
Left: Canongate Kirk, Edinburgh. Photographs: Mr. George Hay

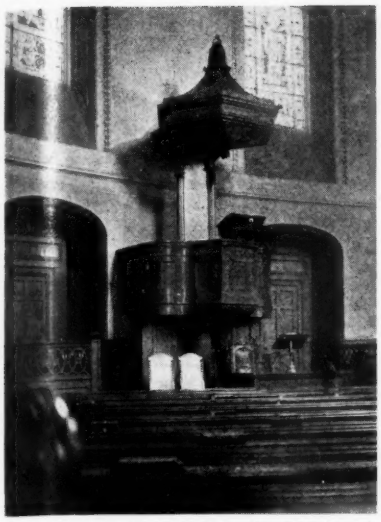
ments; when pews were installed they were adapted to this arrangement: thus on a Communion Sabbath the *Predigtkirche* became a *Sakramentskirche*. Protracted Communion seasons, with their numerous 'diets of worship', are now obsolete except in the Highlands. 'Simultaneous Communion', introduced in the early 19th century, is now the usual practice; the elders take the elements to the communicants who receive them sitting in the pews (which in most churches are decked with white linen clipped to the book-boards, so as to resemble tables). Old-fashioned Presbyterianism was profoundly sacramental, and this was emphasized by the 'common cup' or chalice instead of the modern 'individual cup' (small glass receptacles on trays). For Baptism, there was a silver or pewter bowl, usually placed in a ring bracketted to the pulpit—more seemly than many a modern font of glaring white marble, like a tombstone in a wood yard of dark pews.

A picturesque feature of country kirks (17th and 18th centuries) are the outside 'forestairs' leading to the 'lofts' in the transepts or wings ('iles'). A laird would build his burial vault on a level with the ordinary folk, and his elevated family pew over it, so that he worshipped above the remains of his ancestors. The classical culture of 'Moderate' patrons found expression in pompous mausoleums, pedantic memorial tablets and ornate galleried pews, in striking contrast to the spartan severity of the rest of the kirk. It is surprising to find a large, plain classical church nestling at the foot of the desolate Dalveen Pass, Dumfriesshire; even more so to enter this sombre kirk of Durrisdeer (1699) and peer through an arch at the Queensberry Monument, magnificent in marble Baroque. There are superb 'laird's lofts' in plain country churches like Cullen, Banffshire, and Kilbirnie, Ayrshire. Sometimes these open into spacious 'retiring-rooms'. Sir William Bruce, architect of Holyrood, built a two-storey addition of this kind at Abercorn, near Linlithgow (*circa* 1688), for the Hopetoun family; panelled in Memel pine, it is graced by Ionic pilasters and the windows were said to be among the first in Scotland to be properly sashed. During the 18th century sashed windows became customary in kirks, which accentuated their domestic appearance. As in English meeting houses of the same period, the canopied pulpit usually stood in the middle of the long side, flanked by two large round-headed windows. Not till the 19th century did it gravitate to the 'east end'.

The high pulpit with its formidable sounding-board, crowned by a gilded dove or urn, corresponded to the 'three-decker' in the English Church, but there was only one ancillary desk, intended for the precentor who led the singing (organs were not sanctioned till *circa* 1870). Pulpits of the 16th century were small, with a graceful curved breast; one of these (popularly associated with Knox) has been restored to use in the University Chapel, St. Andrews. Larger kirks of the Reformation period were furnished with the 'Rondel'. This consisted of a space below the pulpit proper enclosed by panelling, curving out to form a reading desk in front (it can be found in Holland). In St. Giles', Edinburgh, there was 'a pulpit with lettroun and saitts about the same' (1581). The 'Reader' conducted a simple service from this desk according to Knox's *Book of Common Order*; then the minister entered the pulpit to preach. When the office of Reader became obsolete his desk was usually assigned to the precentor. There used to be a fine Rondel in the auld kirk of Ayr (1653), but it has been emasculated and bracketted to a conspicuous organcase. Victorian 'improvers' were actuated by a perverse urge to tamper with pulpits, which were usually the most dignified feature of the kirk's 'plenishing'. Among the surviving 17th century pulpits may be mentioned Archbishop Leighton's at Newbattle, Midlothian, and a fine specimen dating from 1668, now in St. Mary's (Gaelic) Church, Inverness. Some good examples may be seen in the Highlands, where conservatism is still strong, e.g. Kiltearn, Rosshire. Golspie, Sutherland (1738) possesses a 'long Communion table', and the Duke's loft (1793).

The T-type of kirk may be found all over Scotland. It makes for good acoustics and avoids the featurelessness of the squarish English meeting house, embarrassed by two columns awkwardly set in the midst. At Cromarty there is a charming interior with coved plaster ceiling, engaged Ionic columns and heraldic decorations. Even when there is no woodwork or decoration of any interest, the T-plan often produces a restful impression; visitors to Gargunnock, near Stirling, feel that it harmonizes with village worship much better than the neighbouring church of Kippen, elaborately 'chancelized' by the late Sir D. Y. Cameron, R.S.A. At Gifford, E. Lothian, the original canopied pulpit, commanding the three arms of the T, is pleasantly integrated into the ensemble by dark (modern) panelling. The organ and choir are inconspicuous, the carpets and blinds are red, the walls cream, the curved ceiling white. Round-headed sashed windows give a clear view of fine old trees in the churchyard. The high tower, surmounted by a small spire, stands on the long side of the T, and looks straight down the broad main street. The plain harled kirk dominates its environment, without losing touch with the homes of the people. No case here of 'procul, O procul este, profani!' Both village and sanctuary were planned to harmonize (*circa* 1710).

There are some other happy instances of adaptation to environment. At Inveraray, on Loch Fyne, the classic court house and steepled church do not look out of place among plain, white-washed burgher dwellings. At Bowmore in Islay, the striking



St. Andrew's Parish Church, Edinburgh. Photo: Mr. George Hay

Kiltearn Parish Church, Rosshire. Photo: Mr. George Hay

Newburn Parish Church, Fife. Photo: Mr. George Hay

circular church of Kilarrow with its pointed roof, polygonal tower and cupola, stands strategically at the head of a wide street sloping down to the sea and finally terminating as a jetty. In the North white-harled churches like Dunnet, Caithness, stand out in clean-cut simplicity. Only gradually is this kind of beauty being appreciated.

Towards the close of the 18th century, Lowland villages expanded into towns and towns into cities. Larger kirks were required. The T-type gave place to buildings reminiscent of the Continental *Zentralkirche*. Instead of 'lofts' in the three wings, a horse-shoe gallery would almost encircle the auditorium; sometimes there would be two tiers of galleries; e.g. Montrose and (Old) St. Cuthbert's, Edinburgh. Many of these large preaching houses *do* deserve the epithet 'barnlike'; but a galleried kirk is not usually dull if it be circular, octagonal or oval. Kelso parish church, Roxburgh-shire (1773) takes its place among the 'octagon chapels' once popular in certain Anglican and Nonconformist circles. This ivy-covered octagon is the kind of building caricatured by Gothic Revivalists. Eight stout Doric columns succeed in keeping the galleries relatively subordinate; the bad features are the dominant Victorian organ-pipes, console and pitch-pine pulpit. The immense slate roof tapering to a turret on top has been compared to a Border cattle-mart . . . but, after all, should not a church bear some relation to the everyday business of the community?

In the city churches of the 18th century we find a more pronounced classical type, designed to harmonize with elegant town-planning. St. Andrew's, Glasgow (1740-56), was designed for the 'Tobacco Lords' by Allan Dreghorn, who was inspired by St. Martin's-in-the-Fields (Gibbs, 1722). The interior is certainly reminiscent of the contemporary London church. The galleries are organically related to the structure, fluted Corinthian columns forming aisles; there is even a shallow chancel. Unimaginative Victorian taste has unfortunately marred the most ambitious Scottish church interior built since the Reformation; the original mahogany pews have been removed, also the sounding-board, whose supporting pillar still stands aimlessly behind the pulpit.

James Gibbs, some years before his death in 1754, sent the magistrates of Aberdeen a plan for re-building the West Church of St. Nicholas in his native city. He made no attempt to harmonize his design with the mediæval choir adjoining the East Church of St. Nicholas (separated by transepts, used as a common vestibule). Yet his plain, classic exterior is much better than the East kirk, as rebuilt by vandals in the 'Gothic' of 1835. Gibbs made no attempt to follow his own precedent at St. Martin's-in-the-Fields as regards the interior. He conformed to the usual Scottish tradition of placing the pulpit halfway down the nave rather than near the 'east end'. Massive piers separate nave and aisles; the galleries are carried right round the church, but are not too oppressive; where the Anglican would expect to find the altar is the magistrates' pew with impressive baldachino, for here the City Fathers worship in state. Gibbs was in feeble health when the West Kirk was built, and he was unable to superintend it personally. The execution therefore fell below his standard. The woodwork is of Scots pine stained dark, and the original box pews, pulpit and sounding-board are fortunately preserved. If the interior is somewhat dingy, the architect is not to blame. Well-meaning Victorians have painted the barrel-vault blue dotted with stars, and have filled the windows with the usual tinted glass.

The ghost of St. Martin's-in-the-Fields did not haunt Gibbs' native land as it haunted N. America (and still does). Colonnades were a luxury to the burgher oligarchies of Scotland, and were costly to build in stone (resourceful New Englanders used timber painted white). The classical steeples of Scotland were stumpier and less graceful than those that were rising across the Atlantic; but James Paterson's St. Enoch's, Glasgow (1780), pointed a symbol of aspiration. In Edinburgh Major Fraser, of the Royal Engineers, showed how a graceful steeple and portico could be attached to an oval body; St. Andrew's, George Street (1785), was the first church in the 'New Town' that steadily spread north of Princes Street. Church architecture was now carefully related to city planning schemes. St. George's (1814), conspicuous for its green copper dome, is a satisfying termination to George Street, though it falls short of Robert Adam's superb Charlotte Square; Adam's church design proving too expensive, it was modified by the less masterly hand of Robert Reid. St. Stephen's, by Playfair (1828), occupies a strategic position at the foot of Frederick Street. The monumental Roman portal under the tower with its imposing flight of steps is arresting (though they lead, oddly, to the gallery only). The vast octagonal auditorium (which is to be reconstructed when conditions permit) must not be judged by its present Victorian furnishings. One tries to visualize it as originally designed.[6] The art of the Adams, which finds such delightful expression in the staircases, ceilings and mantelpieces of the New Town houses was dispensed in the churches with a grudging hand. A study of Wren's city sanctuaries, or even of the better New England meeting houses, might have provided constructive suggestions for the

[6] There used to be *six* long Communion tables (the narrow ends facing the pulpit) in the central area not covered by the galleries. This arrangement is still retained in Holland, and delegates at the World Council of Churches (Amsterdam, 1948) testified to the impressive sight of the communicants leaving the pews to sit at the tables, after the analogy of the Last Supper. [Original plan of St. Stephen's reproduced in Ian G. Lindsay's *Georgian Edinburgh*, 1948.]

Interior of the West Church of St. Nicholas, Aberdeen, by James Gibbs (1754). Photo: A. J. B. Strachan, Aberdeen

artistic treatment of galleries, plastered walls and ceilings. Victorian renovaters sought to enrich bare sanctuaries with tinted glass, varnished woodwork and variegated colour schemes; they only succeeded in making them dark and dingy. The architects who built these churches, however, had to reckon with a town council intent on maximum seating at minimum rates; they were forced to economise therefore on interior decoration, and were tempted to achieve external effect by façade emphasis.

Edinburgh earned the title of 'Modern Athens' by such temple-like structures as the Royal High School and the unfinished Parthenon on the Calton Hill; but she had no ecclesiastical equivalent to St. Pancras Church, London, though St. Mary's (1824), in the centre of Bellevue Crescent, is still fresh-looking with its clear-cut Greek outline. Here and there an elegant temple would be set down in the midst of a douce burgh. There are good examples by John Smith at Elgin (1828) and at Aberdeen (North Church) by Archibald Simpson. The first is wrought in freestone, the second in granite; in both cases the tower is inspired by the Choragic Monument of Lysicrates. There was no Greek Revival in Scotland on a popular scale comparable to that which aroused so much enthusiasm in the United States. Mention, however, must be made of the brilliant episode of 'Greek Thomson', in Glasgow, although he founded no school.

Alexander Thomson (1817-75) flourished after the Greek Revival had run its course. Monumental town planning, exemplified by Great Western Terrace, Glasgow, he linked with monumental churches. He had no sympathy with the Victorian compromise that allowed classic architecture for secular buildings, but reserved Gothic for 'sacred edifices'. Realizing the artificiality of merely reproducing Greek temples, he sought to impregnate the cold correctness of classicism with the oriental sense of awe, mystery and eternity. He had been brought up on the Old Testament Josephus and the apocalyptic pictures of John Martin. Mr. William Power has given the following interpretation of his temperament:

'Those austerely exotic pillars and columns, those grave geometrical arabesques, the complete absence of animal forms, the paucity even of carving, the richly sombre colouring of the smooth wooden surfaces of the interior, the solemn symmetrical opulence of choir-platform and pulpit-throne—what is all this but a Scottish architect's re-creation of Solomon's temple? . . . He was Semitic Thomson before he was Greek Thomson. His Greek studies gave linear purity and a constructive centre to his composite dream of Egyptian, Assyrian and Jewish architecture.' (*The World Unvisited*, Glasgow, 1922.)[7]

Thomson's three Glasgow churches were built for the 'United Presbyterians', now absorbed in the Church of Scotland. In St. Vincent Street Church (1859, now belonging to the Spiritualists) he utilized a difficult sloping site by elevating the portico on a gigantic platform of rusticated masonry; the effect is cyclopean. His 'clerestory' method of lighting is Egyptian, and most effective, as the windows are high above the surrounding buildings. It breaks the monotonous lines of a Greek temple and facili-

7 Arts by J. J. Waddell, (Scottish Ecclesiological Society *Transactions*, 1925, p. 32), and N. R. J. Johnston (R.I.A.S. *Quarterly Illustrated*, No. 43 1933).

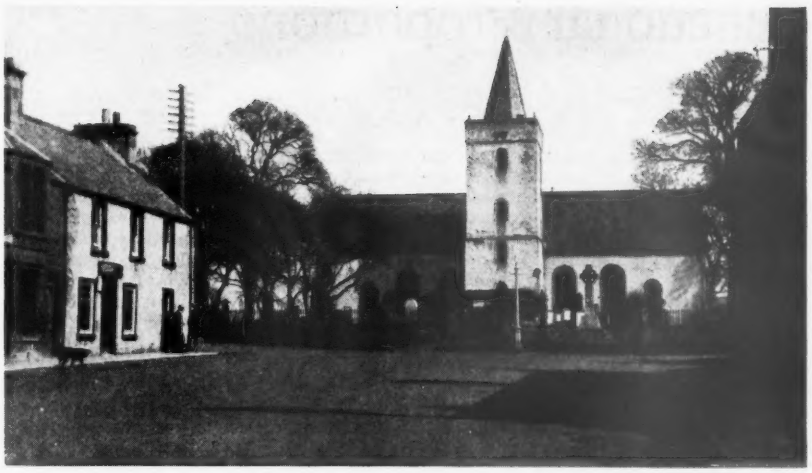
tates the integration of galleries, built into 'aisles'. The tower is most successful, its conical termination being carried out in Egyptian detail yet with classic grace.

'Greek Thomson' was modern in his emphasis on outline, mass and proportion —essential if a city church is to hold its own against encroaching business buildings. He was modern also in his emphasis on acoustics. He was in advance of his generation in relating architecture to the subsidiary arts, designing his own carpets, furniture and mural decoration (plain wood lining covered with stencil ornament, no plaster surfaces). Although he died before the 'renascence of worship' modified the setting for Presbyterian worship, he produced at Queen's Park a colourful interior that thrilled Ford Madox Brown. There were no aspiring arches or mysterious vistas to touch the springs of romanticism; yet the symmetry of the temple, the Phoenician doorways, the Greek detail and the glow of Egyptian colour, from the vestibule to the furthest corner of the galleries, proclaimed that the architect had blended with imaginative genius the rival conceptions of the 'auditorium' and the 'shrine'. Alas! 'Queen's Park St. George's' was 'blitzed' during World War II, while hundreds of nondescript churches survived.

Heritors, town councils and building committees were seldom as sensible as the prosperous Glasgow citizens who made 'Greek Thomson' their architect. Most church authorities 'fell for' the picturesque offers of romanticism, whose wings they pruned with traditional parsimony. Towards the close of the 18th century the 'barn' type of kirk began to cultivate pointed windows with diamond panes. In Sir Walter Scott's *The Antiquary*, a tradesman remarks: 'It will be very tasteful, just in the style of modern Gothic.' Mr. Oldbuck replies: 'Lord, deliver us from this Gothic generation!'

After the Napoleonic Wars a new type of church became popular in Scotland—a pinnacled and battlemented stone box with a tower mechanically set at one end ('the locomotive style'). Architects like Gillespie Graham perversely went out of their way to adopt Perpendicular, which had no roots in Scottish tradition. Nevertheless, this type of church, spacious and well-lighted, was usually better suited to congregational worship than the 'period Gothic' essays of the later 19th century. 'Ecclesiology' has corrected a vicious taste for dominant organ-pipes and platform pulpits; but it has also encouraged imitative 'chancelitis' and the doctrinaire cult of the cruciform plan.

Now that austerity has rendered obsolete the costly reproduction of mediæval styles, characterized by frigid stone interiors and bad acoustics, it is to be hoped that the authorities of the Church of Scotland will reconsider the classic tradition in its simpler phases instead of preferring a shoddy 'near-Gothic'. If austerity is not merely a virtue but a necessity, a bold functional architecture will surely come into its own; good proportions are preferable to cheap substitutes for rich symbolism, which cannot now be satisfied. We need not emulate factories or cinemas. Presbyterians ought to study their own neglected post-Reformation heritage, not with a view to reproducing copies of old-fashioned kirks, but that their best values, artistic and functional, may be re-expressed in modern idiom to suit modern needs. The commanding position of the pulpit as 'the throne of the Word of God' need not be incompatible with giving the Communion table historic centrality, and subordinating choir and organ to the main instruments of worship. The Church of Scotland must learn to build her positive, robust theology into her kirks, gracefully blending the rival conceptions of the auditorium and the shrine.



Top: Yester Kirk, Gifford, E. Lothian (1710). Below: Kilarrow Church, Bowmore, Islay. Photos: Ian G. Lindsay

Right: Dunnet Parish Church, Caithness

Functional Proportion

By H. Lewis Curtis [*F*]

THERE WAS published recently, posthumously in the JOURNAL, a study by Mr. Manning Robertson on the application of geometrical constructions to architectural design. The study is one of many similar attempts to establish some sort of geometrical or mathematical basis for those combinations of forms of varying size and shape which experience has shown to be generally pleasing. Like most similar studies it is unsatisfying because it is in essence entirely empirical. No logical reason is offered to explain why special numerical or geometrical relationships should be more satisfactory than others and the thesis appears to be derived from no general theory of visual impressions. Until some satisfactory general theory is invented it seems probable that studies of this kind will remain little more than a fascinating pastime for the curious, having no lasting effect on the development of art and only of casual interest to the practical designer.

Mathematical formulæ can be, and certainly are, used by experienced designers, but such formulæ are usually nothing more than convenient ways of recording in the designer's mind combinations of proportions or shapes that he has found by experience to be successful in the past, and wishes to repeat or perhaps to improve. If, for instance, I have in my last design found that a window architrave, in width one-sixth of the window width, looked well, I may take care to use the same proportion in my next. An experienced architect will often retain in his mind a large repertoire of such convenient aids to visual memory.

There is, of course, another quite different reason which inclines designers to fit the patterns they make on to geometrical frames. In matters of design the final arbiter is the eye. No matter what theory has governed the making of the design the final result is only successful if the eye approves. Now, to design by eye alone is extremely fatiguing and with many designers prolonged study of a design induces an uncomfortable sense of uncertainty. A devil of doubt sits beside the artist and asks in mocking tones whether he is 'sure'. Would this feature perhaps be better if a trifle smaller or larger? Could that feature be improved by an increase in length? When this trouble assails the artist he is liable to adopt a psychological device, popular with children, and where no logical reason can be found to be applied, to invent a reason based on no particular logical process. Having decided by eye that a feature should be about three times the size of an adjoining one, it is a comfort to the mind to make it exactly three times, for one feels that this point has at least been decided by some law even if it is not the correct law called for by the occasion. This process, moreover, is not as illogical as it may seem, for there is no doubt that the eye can detect a great many geometrical relationships, and the spectator usually derives at least some satisfying sense of order wherever a design conforms to a law even if that law be merely arbitrary.

But in this age of rationalization most of us will ask for something more and there is at the moment a very pressing need for a systematic analysis of visual effects on which could be based a theory of composition something better than purely empiric.

In what follows I offer with great diffidence a suggestion for the first step in such an analysis. It owes so much to previous students of the subject that acknowledgement would be impossible, and I claim for it no sort of originality beyond a possible new method of approach.

The simplest form of composition in visual art would appear to consist in the juxtaposition (in contact) of two objects. It is necessary for simplicity to demand contact because visually two objects with a space between them constitute a composition of three objects, the space between being thought of by the observer, at least in most cases, as a partially defined visual object. This may be clearer in illustration (Fig. 1).

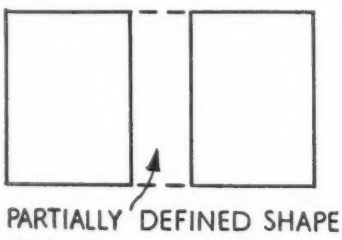


Fig. 1

When a pair of objects is presented to vision, if they be equal in shape and size (Fig. 2) and in contact, the observer is faced with a slight perplexity, looking from one to the other he is unable to fix his attention on either without feeling that he is in some degree being unfair to the other. It is of course widely recognized by designers that equal division in composition is dangerous. If the two equal objects are part of a man-made design, the observer will feel perhaps a positive sense of irritation at something in which the designer appears to have made an equivocal statement.

If the objects are of differing sizes, however, a very definite effect upon the eye is produced and in the compositions of an artist a sense of intention is received by the observer.

It is, I suppose, axiomatic that when two

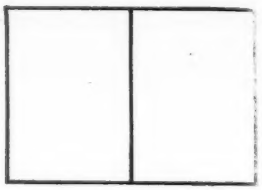


Fig. 2

objects are presented simultaneously the spectator sees the larger before he sees the smaller. This is sufficiently obvious if the difference is great; one sees the haystack before the needle. When the difference is less pronounced it may not be so convincing. It seems probable that there is a time factor in the process. A big difference in size, if not too big, is rapidly perceived, a lesser difference more slowly. It is probable that the speed of perception at least within the normal angle of vision is proportional to the difference in size.

If the successive visual impressions, larger followed by smaller, be admitted it is inevitable that the eyes travel from the larger to the smaller, and it is, I believe, this fact which forms the basis of proportional division in architectural or, indeed, any other visual art; for a device by which an artist can persuade, or even force, the eye to travel enables him to direct our eyes to the things he wants us to see, thus ensuring that the elements of his composition are seen and adequately appreciated in the most effective order.

In pursuing the consideration of the simplest type of composition, the combination of two elements, we can further simplify the problem by reducing the elements to a single dimension, and deal only with lengths.

Fig. 3 shows on the left a line divided with a large difference. The eye is directed with some force toward C, and indeed possibly with sufficient force to overshoot C and to come to momentary rest at X. If at X there were placed some object of special interest, the period of rest might well be more than momentary. This device is used with great effect in the Greek Doric order where the marked difference in length between the column shaft and cap directs the eye to the entablature, where it is rewarded by the interesting details of triglyphs and sculpture filled metopes as in Fig. 4.

In Fig. 3 on the right a less pronounced division is shown in which the eye is perhaps directed to some point between B and C. This type of proportional division is successfully used in designs where an order is imposed on a podium as in Fig. 5. The reasons for directing the eyes downward toward the podium are too complex to describe fully in these notes, although it may be noted that at a first view of a façade with this horizontal division, the spectator

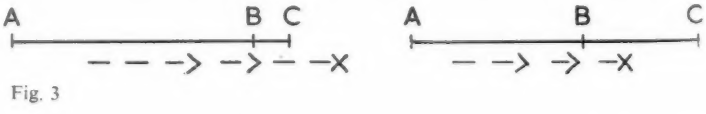


Fig. 3

ERRATUM

The illustration block of fig. 5 on page 179 was accidentally reversed after the JOURNAL had been passed for printing.

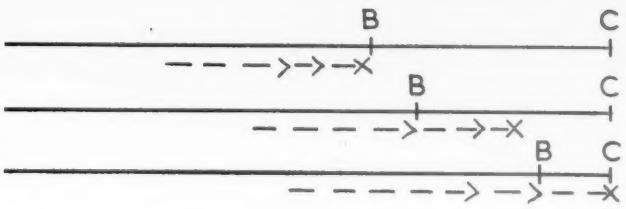


Fig. 5

is liable to ignore the podium owing to the greatly superior interest of the order above and an arrangement which persuades him to take note of the important substructure ensures that he takes in the whole of the composition and not a part of it.

To continue, however, with the consideration of the division of a single length into two parts, it is evident that there must be three special divisions of peculiar significance to a designer. These are illustrated in Fig. 6.

In Fig. 6 (1) the proportion (if indeed it is correctly shown) is such that the eye is directed to B. I can offer no logical reason, but suggest that in this case the position of the 'golden rule' in which

the eye is intended to be int midway between B and st I fear for even weaker the first case, that possibly nal of the square on AB.

it is assumed that the eye to rest at C, and perhaps uch that AC is the diagonal of the rectangle with sides AB and $\frac{AB}{2}$

But in suggesting these mathematical relationships I am in danger of falling into the very error that I deplore of weaving magical numerical fancies into a theory which should be based, if possible, on experience or, better still, experiment alone.

It is, I think, justifiable to say that experience shows that the positions for B in the three cases given above are near to the point which should give the intended effect, because a study of successful architectural designs strongly suggests that proportions of the kind have actually been used with that intention.

If it were possible to devise a method of measuring accurately the very small movements that take place when the human eye examines an architectural composition some proper experimental proof of the matter might be established. A prolonged study, however, of the combinations in proportion that have been used by designers, and particularly those which have been constantly repeated over long periods, might give at least a strong presumption that the use of proportional division in design is no haphazard process or dependent on magical recipes, but something with a logical basis capable of being used with conscious intention.

There will always be those who believe that any attempt to rationalize in the arts will make the exercise of æsthetic abilities mechanical, and that where logic steps in inspiration flies out. Their fears are almost certainly needless. Artists have in all ages shown themselves ready and able to work contentedly within systems of rules whether imposed by religion or social conditions or by academic authority, however arbitrary such rules may have been. A fuller knowledge of what actually takes place in the minds of those who look at a work of art when it is presented to them can be nothing but gain to the artist who prepares the work.

Correspondence

FUNCTIONAL PROPORTION

To the Editor, The R.I.B.A. Journal

Sir,—I appreciate the opportunity which has been given to me of reading before publication Mr. Lewis Curtis's interesting comments under the heading 'Functional Proportion' upon Mr. Manning Robertson's thesis entitled 'The Mystery of Proportion in Design'.

In fairness to Mr. Robertson I feel I should repeat here what I have already explained elsewhere, namely, that my father imposed a condition upon all to whom he taught his method of applying mathematically controlled proportions in design, and that condition was 'that they should not reteach or publish the information which he gave them'. A hint of this condition was given by Mr. Robertson to indicate the handicap which he had to face, but his critics do not seem to have appreciated all that this reference involved.

My own preliminary articles upon my father's work, which started to appear in last September's issue of ARCHITECTURAL DESIGN, give some of the logical reasons and explanations which I agree are necessary to a thorough understanding of Mr. Robertson's account of his research.

Personally, I wish there were more architects taking a keen interest in the subject like Mr. Curtis, and I wish to thank him very heartily for his suggestions for strengthening its claims. It is encouraging to find Mr. Curtis giving considerable support to the idea of mathematically controlled proportions by admitting that 'Mathematical formulæ can be, and certainly are, used by experienced designers', to which I should like to add these words 'as indeed they have been by great men throughout the ages'. I feel sure Mr. Curtis will concur in this.

I must, however, point out that Mr. Curtis is under a misapprehension in thinking that the method Mr. Robertson has used is 'in essence essentially empirical'. It is, in fact, a mathematical process. Mathematics is a science, and we are told there is no other science which rests on a firmer base than mathematics.

Lloyd's Encyclopædic Dictionary, which was published in 1895, and still holds its high position as an authority amongst books of its kind, tells us that 'Mathematics like logic is one of the forms of science called an abstract science'. It further tells us 'No science rests on a firmer base than mathematics, which, being founded on demonstrative evidence, may be accepted as absolutely true'. Again, it says 'the results in logic which like mathematics is a deductive science are much less certain for errors may creep into the premises with the result of vitiating the conclusions. All other sciences are to a large extent inductive. These resting only upon probable evidence are not really science or knowledge in the strict sense of the word, but continually approach nearer and nearer to it as scientific methods improve. The sciences vary in the distances they have moved towards perfection.'

Further than this, Funk and Wagnalls tell us in their new 'Standard' Dictionary, published so recently as 1946, that mathematics is 'the science which treats of quantity or magnitude and their measurements, and that investigates deductively the special series and numerical relations existing between objects of perception: in a wider sense the group of allied sciences concerned with the concrete application of such abstract data'.

In the light of these descriptions of mathematics and its position among other sciences it can not be said with any degree of truth that a method which enables the laws of such a science to be applied in a practical way is 'in essence essentially em-

pirical'. It is, in fact, the very opposite of this idea. Nevertheless, I wish sincerely that some able scientist would pursue the psychological aspect for us.

Referring to logic I would recall that it includes the operation of naming, for language is an instrument of thought, as well as a means of communicating our thoughts. One cannot, therefore, be too meticulous in the choice of words, and in this I find Mr. Curtis is a little inconsistent in referring to the 'eye' and the 'mind', and sometimes saying 'the eye' when he means the 'mind', which is really 'the final arbiter' in matters of design. In the interest of scientific discussion I do not think I can be accused of 'hair splitting' in drawing attention to this point of detail, since it is most desirable that we should be crystal clear in what we say to avoid misunderstandings.

What I have said does not, of course, in any way decry the suggestion for 'a systematic analysis of visual effects on which could be based a theory of composition', which I agree would be all to the good. The suggestion Mr. Curtis has made is full of interest, even if all may not think quite the same as he does about it. But the pursuit of likes and dislikes of the mind will take a long time, I fear, to give us practical results, and in the meantime I suggest there is much we can do to advance our knowledge of the application of mathematical proportions with advantage to design in all its different spheres. The application of mathematically controlled proportions need not be 'a haphazard process', since they can be obtained with 'conscious intention' by means of R's. related scale of set squares.

I believe that most architects will agree heartily with Mr. Curtis's remarks about the 'extreme fatigue and uncertainty' which arise when designing 'by eye alone'. All I would say about this now is that R's. method of settling such points of detail is an immense aid to design by replacing the doubt which arises from the trial and error method with encouraging assurance which arises from the use of related set squares. These produce an orderly arrangement of forms in design, which do in fact give satisfaction to the mind through the eye when they have been intelligently applied.—Yours faithfully,

A. LEONARD ROBERTS [*F*],
Hon. Secretary, R.I.B.A.

ARCHITECTURAL EDUCATION: NUMBERS UNDER TRAINING

Sir,—The MARS Group and the Architectural Students' Association are grateful to the officers of the R.I.B.A. Board of Architectural Education for the attention they have paid to Part 2 of the interim report of their joint committee, and for the corrections to some of the estimated figures contained in it. They would point out, however, that certain of the officers' remarks would appear to be misleading unless they are read carefully.

It was estimated in the report that about 7,000 were preparing for architecture without school training. This figure is rightly reduced to about 5,000 by the officers, who have the information that there are about 3,000 in schools not taking exempting courses instead of the 1,000 estimated by the joint committee.

The officers then argue that this 5,000 is considerably reduced if various allowances are made, and state that the MARS/Arch. S.A. figure of 7,000 is in consequence reduced to 1,700 whose method of training is unknown. After certain further deductions they conclude that the residue is negligible.

MARS/Arch.S.A. never estimated that there were 7,000 whose method of training was unknown; they estimated that there were 7,000 outside the schools. In order to reduce the 7,000 the officers actually deduct the numbers taking correspondence courses, which are clearly stated in the report to be included in the 7,000. They also deduct certain probationers whose methods of *qualification* are known, which is again quite irrelevant to the point.

The points made by MARS/Arch.S.A. are fully confirmed by the officers' figures, namely, that training in a fully recognized school is by no means as universal a method of preparing for architecture as it is commonly believed to be; that one of the most important tasks in architectural education today is to raise the standards of training for students who at present are outside these schools; and that the requirements of the R.I.B.A. external examinations are of vital importance because they set the standards for the majority of potential architects. This majority, as MARS/Arch. S.A. originally suggested, is in the neighbourhood of 8,000 out of the July total of 13,000.—Yours faithfully,

THURSTON WILLIAMS,
President, Arch/SA
P. L. COCKE [*A*],
Secretary, MARS Group

HARLOW NEW TOWN

Sir,—Your correspondents on this subject have expressed divergent points of view, but have, to my mind, missed the most significant fact revealed by the exhibition, namely, the great gulf between the standards of design of the principal buildings and of the houses.

I thought the Town Centre splendid, with stimulating buildings imaginatively grouped. The houses, on the other hand, were dull and unimaginative to a degree. They were made to that recipe for house-design, in vogue at the moment, by which strips of identical dwellings are extruded and just guillotined off when the required length of block is reached! That sort of house-design may be functional (if one does not accept a friendly appearance as one of the functions of a dwelling), but it is not worthy of the fine Master Plan that had provided the house-designer with unique opportunities.

A more cheerful note was struck by an announcement in the pamphlet that 'outside' architects may be called in to design some of the sections of houses. Will architects be selected who conform to the approved 'recipe' or will there be found, by competition or otherwise, those who will use, in the design of the dwellings, as much imagination as Mr. Gibberd has displayed in his Town Centre?—Yours faithfully,

CLIFFORD E. CULPIN [*F*]

THE GOLDEN SECTION OR CUT

Sir,—When Mr. C. J. Holmes—now an Associate—wrote the letter which appeared over his name in the November JOURNAL he was a 'Student' as there stated. If he had explained that he had recently become a 'Registered Architect' after passing the necessary qualifying examination, which also entitled him to apply for his Associateship, his position would have been understood.

I am sure the circumstances now explained at the end of his second letter in the January JOURNAL will meet with general sympathy and understanding. Nevertheless, it certainly is a mistaken idea on the part of a young architect, that, having acquired the minimum amount of knowledge necessary to obtain qualification and registration, possibly with special credit to himself, he is at once an authority on a particular subject like proportion, of which he will not have had time to obtain more than a superficial knowledge for the purpose of examination.

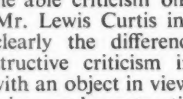
The Institute attaches great importance to post-graduate study of special subjects, so there is nothing derogatory in the idea of a young architect showing 'a spirit of studentship', indeed, many of our noted architects have shown it with pride to the ends of their lives.

Logic as a science, useful as it can be, is generally regarded as less reliable than the laws of mathematics. It therefore requires to be used with extreme care in clear and correct thinking, otherwise it can lead one far from the truth, as Mr. Holmes has shown.

If one compares what Mr. Holmes has said with the able criticism offered in an article by Mr. Lewis Curtis in this issue, one sees clearly the difference between merely destructive criticism in the first instance—with an object in view which did not really arise—and constructive criticism in the second. Constructive criticism is always useful and appreciated in the interest of advancing knowledge.

I propose in the next available issue of the JOURNAL in the light of Mr. Lewis Curtis's article, to explain why Mr. Manning Robertson could not give certain information, the absence of which has come in for criticism. Meantime I admit that its unavoidable absence was a weakness in the thesis, which Mr. Holmes quite correctly noticed.—Yours faithfully,

A. LEONARD ROBERTS [*F*],
Hon. Secretary, R.I.B.A.



Review of Construction and Materials

This section gives technical and general information. The following bodies deal with specialized branches of research and will willingly answer inquiries.
The Director, The Building Research Station, Garston, near Watford, Herts.
Telephone: Garston 2246.
The Director, The Forest Products Research Laboratory, Princes Risborough, Bucks.
Telephone: Princes Risborough 101.
The Director, The British Standards Institution, 28 Victoria Street, Westminster, S.W.1.
Telephone: Abbey 3333.
The Deputy Director, The Building Centre, 9 Conduit Street, W.1. Telephone: Mayfair 8641-46.

Report of the Building Research Board. The initials B.R.S. are so familiar to architects and others, and stand for such an ever-ready and willing source of advice and help, that the report of the work for the years 1940-45 will be read with appreciation and friendliness. The booklet begins with a report of the Building Research Board for the years 1940-45, addressed to the Lords of the Committee of the Privy Council for Scientific and Industrial Research; it is followed by a report of the Director of Building Research for 1945 with a review of the period 1940-45, in which it is explained that since 1939 it has not been possible to publish an annual report, and that it was not until 1942 that the Station was able to pay serious attention to the needs of the post-war period.

Part 1 then follows with a summary of work for 1945, under the headings of materials, building construction, design and performance of structures, soil mechanics, and so on. Part 2 contains a review of war-time work, including alternative materials and methods of construction, performance of buildings under aerial attack, tests on bridges, soil mechanics, and other war-time work. Appendices deal with staff matters and publications. Fifty-four photographs and one diagram illustrate the report.

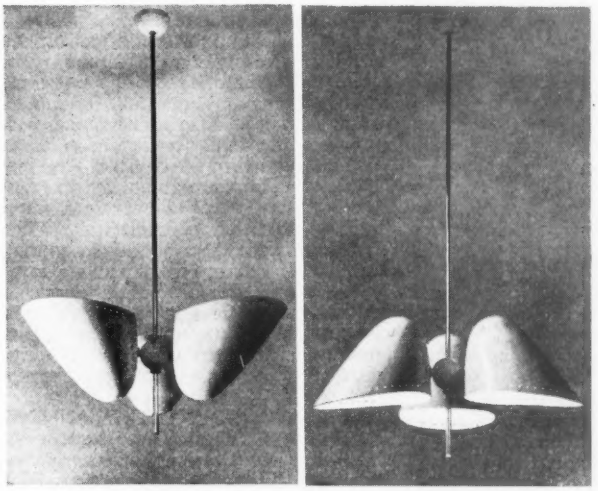
The report can be bought from H.M.S.O., price 3*s.* 6*d.* net.

Shock Concrete. The Building Science Abstract, No. 1413, Volume XXI, compiled by the Building Research Station, describes a method of making concrete in Holland by the 'shock' process. A very dry mix is placed in moulds fixed to special shock-tables giving some 200 shocks a minute. The concrete is then cured for 5 to 8 hours in curing rooms having a temperature of 80 degrees F. to 120 degrees F. The Abstract says that the compactness of the product is attributed to the method of suddenly arresting the fall of the concrete particles which are forced very closely together, thus filling all voids and squeezing out superfluous water and air. The result is quoted as being a very dense, non-permeable, and extremely durable concrete.

Timber Economics. The Timber Development Association recently held a meeting to discuss the economics of timber substitution, that being the title of a booklet they have produced. The Association have submitted to the President of the Board of Trade a memorandum drawing attention to certain consequences of the policy of substituting manufactured materials for timber, and in the appendix to the booklet over 100 items are given in which steel and concrete have been substituted. The booklet states that the restrictions placed on the import and use of timber are due to the stringency in foreign exchange rather than to any stringency in world supplies. After recalling that the deficiency of our timber imports had been countered by rigid economy in design, and by the prohibition of the use of timber for non-essential purposes, a third method is mentioned—the use of substitute materials, and this is what causes the Association concern.

It is claimed that the main disadvantages of the manufactured substitutes are: (1) increase in production costs, with attendant consequences; (2) diversion of manufacturing capacity from export to domestic consumption; (3) the indirect increase of dollar expenditure on substitute materials. On the subject of the substitution of steel for timber, it is argued that if this practice were stopped the steel thus released for export would be worth from £50 per ton to £500 according to the particular purpose for which it was to be used. In 1947 nearly 3,000,000 tons of steel were used in the production of light rolled products, and timber could have been used for at least 15 per cent of them, but even taking the proportion at 10 per cent, a net gain would be shown of at least 10,000,000 pounds worth of dollars.

The booklet then considers the case of concrete as a substitute. The points to be considered are: (1) the productive capacity of the industry; (2) the coal consumption; (3) diversion of labour and capital equipment involved in the setting-up of new factories and processes; (4) extra labour and transport in handling concrete units heavier than timber sections of the same strength. Timber is one of the cheapest raw materials, and requires the least processing.



A Versalite electric light fitting with rotatable shades

Electric Light Fittings. In the editorial pages of the November JOURNAL reference was made to the exhibition of work done by the Faculty of Royal Designers for Industry, and the accompanying illustration shows a light fitting, which is one of a series called Versalite, designed by A. B. Read, for Messrs. Troughton and Young Ltd. The shades can be turned to direct their light up, down, or at any angle, and are kept steady by a friction grip. They are made of aluminium, finished satin brass or satin chromium plate, or of various plastic materials. The series includes pendants, brackets, and an extending arm wall bracket.

Some persons prefer a translucent shade, as it does away with the sharp contrast between the comparative darkness of an opaque shade and the brilliant light showing over the edge, and they may therefore be interested in the Irish Le Klint shades, which are of Danish origin, but are being made in Dublin. They were exhibited at the exhibition of Danish art, held in London. Each shade is hand-made, and at present there are three types, in varying sizes; the hanging or table, the ceiling or wall, and the lantern in pumpkin or Chinese design. All are collapsible, and so can easily be transported. Inquiries should be addressed to Irish Le Klint Shades Ltd., 19 Merrion Square, Dublin, who have been granted an export licence.

British Standard. The British Standards Institution have recently published the following Standards and Codes of Practice: B.S. 1195.1948. Kitchen fitments and equipment. Contents—space and overall dimensions in fitments and equipment generally; dimensions and internal arrangements of storage units, with diagrams; construction of storage units; appendices giving list of suitable timbers and plywood. Price 4*s.* net, post free.

Practice Notes

Edited by Charles Woodward [*A*]

IN PARLIAMENT. Development Charge. Asked whether, in view of the Central Land Board's decision that the cubic contents of buildings occupying small sites can not be aggregated for the purpose of assessing the development charge, when re-development is contemplated with a single composite building over the amalgamated sites, he will make an Order that such aggregation will be permitted, since refusal to do so is imposing severe hardship on owners of such sites and is impeding practical schemes of development; and if he will make a regulation to the effect that where a development scheme has received his Department's approval, the aggregation of the cubic content of all the buildings upon the site of such development will be permitted, the Minister of Town and Country Planning replied: The answer is 'No, Sir'. The hon. Member no doubt has in mind the building of a block of flats on a site formerly occupied by a number of houses. The owner in such a case has a claim under Part VI of the Town and Country Planning Act, 1947, in respect of any diminution in value resulting from the Act. (25 January 1949.)

War Damage (Displaced Property). Asked if the replacement of dwellings acquired under the Town and Country Planning Act is to be restricted to maximum selling price and superficial area on the same basis as applies to war damage property payments; or is it to be related to the floor area and value of the displaced property, the Minister of Town and Country Planning replied: Under Section 30 of the Town and Country Planning Act, 1944, as amended and incorporated in the 1947 Act, the criterion is the reasonable requirements of the displaced person. Normally the basis to be adopted will be that used for war damage value payments, but special treatment will be possible in exceptional circumstances. Broadly, we will try to provide equivalent accommodation, unless the circumstances are exceptional. (25 January 1949.)

Architectural and Historical Buildings. Asked whether he was aware that although the Lord Chancellor, during the debate on the Town and Country Planning Bill, 1944, promised publication from time to time of the lists of buildings of special architectural or historical interest compiled under Section 42 of that Act, none of the lists has yet been published, not even those issued over a year ago; and whether he will make a statement on this matter, the Minister of Town and Country Planning replied: I am considering what can be done about publication and hope to make a statement shortly. I am advised that the statutory lists giving only the addresses of the buildings and the names of the owner and occupier would not be of great value to the general public, and that the publication of lists giving more information about the buildings would be a heavy task whose preparation might seriously delay the completion of the lists themselves. In the meantime, provisional lists of the fuller type I have in mind are supplied to interested societies. The number of these provisional lists available is 184, and another 248 are being finally checked. I am arranging also to make statutory lists available to the local Press at the same time as they are deposited with the local authorities. (25 January 1949.)

Petrol Supplies (Housing Contracts). Asked what steps he is taking to ensure that the work of builders, architects, contractors and others engaged in housing contracts will not be held up for lack of petrol; and what arrangements he makes for the appropriate local authorities to be consulted before refusing an application for supplementary petrol from business and professional firms in this class, the Minister of Fuel and Power replied: Regional petroleum officers are authorized to grant supplementary petrol allowances to meet the reasonable needs of builders, architects, contractors and others engaged in housing contracts. It is always open to an applicant to seek support for his application, or to the regional petroleum officer to seek confirmation of any statements in the application, from the local authority concerned. (27 January 1949.)

TOWN AND COUNTRY PLANNING ACT, 1947. Certificate under Section 80, Land Ripe for Development. Owners of land, who have applied to the Minister of Town and Country Planning for a certificate under section 80 that their land is ripe for development, are advised to submit a 'precautionary' claim on the £300 million fund to the Central Land Board before 30 June 1949, in case the certificate is not granted.

Only questions 1, 2, 3, 20 (*d*) (and question 24 where relevant) of Form S.1 need be filled in, and a copy of the completed answers to questions 1 to 4 of Form L.R.D.1 (the application to the Minister) must be attached. If the application is refused, the S.1 will be returned, *on notification to the Board by the claimant*, for the remaining questions to be answered. The usual contribution towards the fees will be payable provided the necessary conditions are fulfilled, including the completion of the optional part of the form.

There may be rare cases where an owner who is completing an L.R.D.1 Form wishes to claim for development value in his land over and above that to which the application relates. Such an owner should complete and submit Form S.1 in a normal manner, taking care to answer question 20 (*d*). (C.L.B/.15, dated 4 January 1949.)

Section 85, land held on charitable trusts. The following advice to charitable bodies on submitting claims on the £300 million fund, and their right to professional fees, is given by the Central Land Board:

(1) *All land held by charitable bodies.* In question 1 of the claim form S.1, the words 'Land held on Charitable Trusts' should be inserted under 'Business or description'.

(2) *Land for which a direction is sought under section* 85 (5). Under section 85 (5) of the Act, trustees of charity land can apply (before 1 July 1951) to the Minister of Town and Country Planning on a form C.T.L. for a direction that their 'investment land' (i.e. land used as a source of revenue) should be treated as 'functional' (i.e. used directly for the purposes of the charity). If such a direction is granted, development on the land for the purpose of the charity is not subject to a charge. In their pamphlet S.1A. the Board have already advised trustees to put in a precautionary claim before 30 June 1949, in respect of such land, in case the application is not granted.

(*a*) As a *further* addition to the answer to question 1 of S.1, the words 'a C.T.L. Form is being submitted' should be inserted.

(*b*) Only questions 1 to 3 (and question 23 or 24 where relevant) need be answered and the form signed.

(*c*) If the application to the Minister for a direction is later refused the form will be returned, *on notification to the Board by the claimant*, for the remaining questions to be answered. The usual contribution towards fees will be payable provided the necessary conditions are fulfilled, including the optional part of the form.

(*d*) The arrangements will *only* apply if the land which is the subject of the application is claimed for as a separate unit, and if the application is submitted to the Minister not later than 31 March 1950.

(3) *Land which is subject to a reference to the Minister under section* 92 (1). Under section 92 (1) of the Act any question whether land is land to which section 85 of the Act applies will be determined by the Minister. If a claimant makes an application under section 92 (1) and also makes a precautionary claim (as he is advised to do in case the Minister's determination should not be made known before the time limit for claims) then:

(*a*) as a further addition to question 1 of S.1 the words 'subject to an application under section 92 (1)' should be inserted.

(*b*) 2 (*b*), (*c*) and (*d*) as above apply.

(C.L.B./16, dated 4 January 1949.)

Control of Advertisements. The Ministry have issued an Explanatory Memorandum on the Town and Country Planning (Control of Advertisements) Regulations, 1948. It is obtainable at H.M. Stationery Office, price 3*d*. net.

Development Charge on houses erected for persons employed in forestry. Circular No. 64, dated 30 December 1948, states that it is proposed to extend the arrangements relating to houses reserved for members of the agricultural population, to cover houses erected for persons employed in forestry.

The Minister, in reply to a question in the House of Commons on November 16 1948, said that in regard to development charge on agricultural cottages this is not collected while the cottage is reserved for members of the agricultural population.

When the cottage ceases to be so reserved the charge becomes payable. (JOURNAL, December 1948, p. 85.)

Similar arrangements will now be applied to houses erected for persons employed in forestry, and to their dependents.

NATIONAL JOINT COUNCIL FOR THE BUILDING INDUSTRY. The National Joint Council have decided that the following new Standard Rates of Wages shall apply as from 7 February 1949:

New Rates (per hour)	*Craftsmen* s. d.	*Labourers* s. d.
London (within 12 miles circle)	2 11½	2 4½
London (12-15 miles) ..	2 11	2 4
Grade 'A' Districts ..	2 10	2 3¼
Grade 'A1' Districts ..	2 9½	2 3
Grade 'A2' Districts ..	2 9	2 2½
Grade 'A3' Districts ..	2 8½	2 2
Liverpool Special ..	2 11½	2 4½

The adjustment of ½*d.* per hour increase is due to the average of the Retail Prices Index figures, published by the Ministry of Labour during the months January to December 1948, being 107¼. Consequential adjustments will be required in the rates of wages of apprentices, young labourers and women operatives.

MINISTRY OF HEALTH CIRCULARS. Circular L.R.L.1/49 dated 14 January 1949 refers to the preparation of Requisitioned Properties for use as Halfway Houses.

W.Cs., Bathrooms, and washing facilities for personal use. There should be a bathroom on each floor of the house, with 'Ascot' or other heater if there is no existing central supply of hot water. A wash hand-basin may be installed in the bathroom. If the number of the families on the floor exceed five, a second (adjacent) bathroom may be installed. Wash hand-basins should not normally be installed in bedrooms. There should be at least one W.C. on each floor, and the W.C. should be separate from the bathroom. Additional W.C.s may be provided in the ratio of one to three or four families; but so far as practicable the W.Cs. should not be 'grouped' near living rooms.

Sinks for washing up or washing clothes. Deep sinks should be provided in the ratio of one sink to each three families. Where there is no central supply of hot water, a small 'Ascot' or other heater should be installed over each sink.

Gas and Electric fires. These may be installed by the local authority where space heating is by gas or electricity, the cost of installation being recovered by way of addition to the accommodation charge. Their use should be at the occupier's risk.

This Circular is addressed to Housing and other Authorities in the London Region.

LAW CASES. Licences for the construction of Private Houses. An interesting case is reported in THE ESTATES GAZETTE for 1 January 1949, and is reproduced here by the courtesy of the editor of that journal. It concerns the distinction between the limitation in the selling price of a new house and the cost of construction of the house as granted by the building licence.

Building licences were granted for six houses at £1,200 each and for two houses at £1,170 each. The licences were endorsed: 'This licence is granted on condition that the licensee does not sell the six houses the erection of which is hereby authorized at a price in excess of £1,200 per house'. The licence for the two houses was similarly endorsed but with the selling price £1,170.

The cost of the land was £200 per plot for each of the eight houses.

The builders claimed £9,612, being six houses at £1,200 each, two houses at £1,170 and preparation of the sites £72.

The defendant owner claimed that the builder could not recover more than £1,000 per house having regard to the terms of the building licences limiting the selling price, which included the cost of the land.

In the course of the judgment, His Honour Sir Lionel Leach, C.C., K.C., said that the licences were issued for the construction of the houses at specified costs, subject only to the condition that they were not to be sold beyond a stipulated price. The sale, of course, would include the land on which the houses were built, but nowhere was it said that the limits fixed for the cost of construction should include the value of the land; all that was said was that if the houses were sold the selling price should include the value of the land. In other words, the owner should not add to the constructional cost the value of the land when he sold; he was bound down, in selling, to the maximum selling price fixed in the licence. By selling at that price he might suffer a loss, but that was his own affair. He had named his selling price, and the licence to build had been issued on that basis, and, in His Honour's opinion, it would certainly require clearer statutory provisions than there were here to deprive the builders of the full benefit of their contract with the defendant. His Honour held that there was no illegality in the builders' case, and, therefore, they were entitled to judgment for the amount claimed, with costs.

(*Note.*—'Selling price' is defined in Form C.L.1136.B as the freehold price, including the cost of roads, sewers and other services.)

Defence Regulation 56A. At Highgate Court on 24 November 1948 an owner of a house was summoned for unlawfully having repairs and decorations carried out at his house. The Friern Barnet Council alleged that work to the amount of £173 in excess of the amount sanctioned by licence was done. For the defence it was submitted that the owner had not paid for the extra work and could not be forced to pay for it and therefore the work was not done 'at his expense' as required by the Regulation. The Bench dismissed the case and agreed to state a case. In refusing costs the Chairman said the Bench had not the slightest sympathy with the defendant.

Book Reviews

Pre-stressed Concrete, by *Gustave Magnel.* (Concrete series.) 9½ in. 215 pp. text illus. Concrete Pubns. 1948. 15*s.*

Gustave Magnel, who is Professor of Reinforced Concrete and Director of the Laboratory at the University of Ghent, is a well-known person in the theoretical and applied technique of pre-stressed concrete. During the war, when it was not possible to use the Freyssinet methods of pre-stressing in Belgium, Professor Magnel devised his own system based on the use of steel plates embodying wedges generally referred to as the Magnel sandwich plates.

A great deal of work has been done in Belgium using the Magnel system, and there is ample evidence to show that it is a practical method of pre-stressing, by tensioning the wires against the concrete when it has hardened.

Professor Magnel is a well-known lecturer on pre-stressed concrete, and is the author of a number of publications in Belgium, and it is all the more welcome that a book by him is now available for use in this country. The book is written in a very lucid manner, starting with an explanation of the principles involved and the methods used to pre-stress. A thorough account of the design of both simply supported and continuous beams is given, together with a description of tests on a 66 ft. span box girder, and various smaller beams.

A very useful analysis is also given of the losses due to the creep of the steel and concrete, with an account of the effect of time and load on pre-stressed concrete. Recommendations are also given on the permissible stresses to be used.

The most interesting chapters for architects, are those describing the practical application of pre-stressed concrete to structural members and pre-cast concrete products. The structural examples given are limited to those using methods developed in Belgium, as naturally the author had more complete information on them, but it is a pity that other examples were not shown as a comparison, such as the bridges in France, the long span factory girders in Sweden, and the airport hangar at Karachi.

The chapter on pre-cast concrete products does include examples of work outside Belgium, but only the account of the Stahlton pre-stressed floor element would appear to be of interest to architects.

As a whole this book is a very useful one, and it covers the subject broadly, but it is especially useful to structural designers, and should assist the trend to use more of this extremely useful material.

L. W. ELLIOTT [*A*]

Flooring Materials, by *F. R. S. Yorke* and *C. R. Fowkes*. 9¾ in. 234 pp. + pls. text illus. Faber and Faber. 1948. £2 2*s*.

There used to be no difficulty about choosing flooring materials for domestic work, but with timber ruled out and linoleum almost unobtainable, the architect must know all about the alternatives. This book, sponsored by Sir Oliver Simmonds, chairman of Simmonds Products Ltd., provides all the answers, not only to the problems of domestic flooring, but also to the much more complicated ones of industry. Each type of flooring is examined in turn under a more or less fixed set of headings, Composition, Thickness, Sub-floor, Laying, Noise, Warmth, Resistance to chipping and cracking, Resistance to abrasion, Resistance to oils, water, and chemicals, Non-slip, and Appearance. The descriptions are straightforward and not unnecessarily technical. Some pages are devoted to special problems, all or nearly all of which show that few flooring materials are ideal, and that the final choice is usually a compromise. It is remarkable how often linoleum is mentioned as the most suitable covering. Whether the American type of asphaltic tile, now being so widely used, will be able to hold its own against good quality linoleum when the supply of linoleum is easier remains to be seen.

At the end of the book there is a schedule of recommended materials which many will regard as the most useful part of it. The authors point out that some (indeed many) of the floorings described are not at present obtainable, and this, joined with the fact that no indication is given of the various makers of the different types of patent floor, reduces the value of the book as an architect's working reference. For students, not yet concerned with supply troubles, it is an excellent book, but the price is much too high. This must in part be due to the production, which is far too lavish. Blank pages, wide margins and so on, are all very well, but if they result in a price of two guineas for what is after all only a text-book they should be omitted. There are a lot of very good photographs of contemporary interiors; the captions give the types of floor they illustrate, there is no other means of telling.

GONTRAN GOULDEN [*A*]

An Understanding of Architecture, by *Robert Lutyens* and *Harold Greenwood* [*FF*]. 7¼ in. 116 incl. xviii pp. text illus. People's Univs. Press. 1948. 6*s*. 6*d*.

It will hardly be claimed that this is the first book of its kind, but it is certainly more original and wiser in method than many. Whether these courageous primers in architectural appreciation succeed in doing more than preach to the already converted is problematical, but every attempt to spread discernment (and incidentally educate the potential client) obviously deserves support.

J. C. P.

Elements of Quantity Surveying. 4th ed. 9¾ in. xi + 287 pp. + folding pl. text diags. 15*s*.

More Advanced Quantity Surveying. 4th ed. Text 9¾ in., pls. pfo. 10½ in. £1 10*s*. Both by *Arthur J. Willis*, F.R.I.C.S. Crosby Lockwood. 1948.

Elements of Quantity Surveying is a book for young students and of particular interest to those preparing for the Intermediate Examination, Part II, of the Royal Institution of Chartered Surveyors. Anyone who masters its pages should have a good grounding in first principles, and be able to 'take-off' and 'work-up' the quantities for a simple building.

There are a great number of examples which, being in handwriting, and being accompanied by drawings to a normal scale, make it easier for the student to associate his studies with his work in an office. There are also useful appendices giving, amongst other things, a list of abbreviations peculiar to the profession.

More Advanced Quantity Surveying is a sequel to the other book, and takes the student up to the level of the Final Examination of the Royal Institution of Chartered Surveyors. It assumes that 'working-up' has already been learned, and gives more complicated examples of 'taking-off', including chapters on reinforced concrete and structural steelwork.

Apart from 'taking-off' the student is taught how to complete the Bill, and the process of tendering, and the relationship of the Bill and Specification are explained. The bugbear of having to turn over the pages to compare the drawings with the examples of 'taking-off', is avoided by the simple expedient of supplying loose drawings in a special folder.

Mr. Willis is a most competent writer and teacher, and both books can be thoroughly recommended. The latest edition brings them into line with recent revisions in the Standard Method of Measurement.

O. A. DAVIS

An English Farmhouse and its neighbourhood, by *Geoffrey Grigson*. Photographs by *Percy Hennell*. Studies in composition and tradition. John Piper. gen. ed. 8¾ in. 128 pp. + 30 colour pls. Max Parrish. 1948. £1 1*s*.

A collapsed or decaying English farmhouse or cottage must be a familiar sight to every country-dweller and to anyone who goes for a walk outside suburbia and the week-ending counties which cluster round London and other large cities. The response to this sight in a countryman will inevitably be different from the feelings of visitors who like and expect a spot of decay and who (with the collapse of a social system which took farming seriously) certainly get it.

Mr. Grigson and Mr. Piper are intellectually more aware of the implications of this sorry sight than either the farmer or the visitor, are more complex in their reactions, are less certain whether it's all lovely or awful, are less concerned with economics than the farmer, and more concerned with abstract beauty than the architect can be. The result is inevitably an indecisive book which does not quite come off. The coloured photographs which are all concerned with the texture and surface of materials in decay, lichens and ruins are, as can be expected from these authors, beautifully observed. The photographs are, I found, much better looked at through a 'telescope' formed by your hand or a short cardboard tube, they come to life in a remarkable way, and the colours, due, I think, to cutting out the surrounding white paper, are then realistic. It was wise to have photographs instead of paintings, Plate 4, Lichens on a freestone wall, and Plate 19, Upright from a fallen barn covered with farm-worker's initials, would otherwise be dismissed as just superb Piperian inventions.

The social history, a piece of which collapses with each farm, is sensitively traced, and the native materials carefully described, down to corrugated and concrete, and the indigenæ—the country people—are seen without pastoral or literary sentimentality.

It is impossible, finds Mr. Grigson, to be enthusiastic over the new Council Houses, but it is also impossible to go on preserving. 'The preservers get in the way of the living. . . . We could be happy if for every Ashton farmhouse which disappears, something better, and of our time, could go up as little noticed and as little conscious of itself.' So ends the book, but we are left with the feeling it is hopeless, and that the hopelessness, the galvanized iron pushed under the thatch, and the nettles are to be our real enjoyment; we are left like Salomè, necrophilists with a bitter taste on our lips.

H. TAYLER [*F*]

The Modern Flat, by *F. R. S. Yorke* and *Frederick Gibberd*. 2nd ed. 11½ in. × 8¾ in. 207 pp. incl. pls. text illus. *Archtl. Press*. 1948. £1 15*s*.

The object of this impressive book, first published in 1937 and now appearing in revised form, is to show the type of building that fulfils contemporary requirements and the kind of urban development where such buildings could become units. Twenty-four fresh examples have been added to the original gallery of multi-storey flat buildings which are briefly described and profusely illustrated. There is a preliminary chapter summarizing the development of the flat plan. Most of the many photographs are superb. If only reality were as handsome as her portrait, but perhaps she is!

Handbook of Perspective, by *W. G. Warren*. 3rd ed. 1948. 10 in. xi + 68 pp. text diags. Crosby Lockwood. 1948. 10*s*. 6*d*.

The author, a New Zealand architect, considers that most books on perspective tend to be too involved and detailed. His method confines the text to a few general principles and the briefest possible directions to explain the diagrams. The book has undergone some revision since its first appearance in 1935.

Notes and Notices

NOTICES

Sixth General Meeting, 1 March 1949 at 6 p.m.
The Sixth General Meeting of the Session 1948-49 will be held on Tuesday 1 March 1949 at 6 p.m. for the following purposes:

To read the minutes of the Fifth General Meeting held on 22 February 1949; formally to admit new members attending for the first time since their election.

Sir Thomas Sheepshanks, K.C.B., K.B.E., Permanent Secretary to the Ministry of Town and Country Planning to read a paper on *The Town and Country Planning Act: Some Implications for Architects.*

Sir Thomas will endeavour to answer as many questions as possible on the Act during the meeting, but he will not deal with questions which apply to the work of the Central Land Board, as these have already been dealt with by Sir Malcolm Trustram Eve at the meeting on 14 December. (Light refreshments will be served before the meeting.)

Seventh General Meeting, 8 March 1949 at 6 p.m.
The Seventh General Meeting of the Session 1948-49 will be held on Tuesday 8 March 1949 at 6 p.m. for the following purposes:

To read the minutes of the Sixth General Meeting held on 1 March 1949; formally to admit new members attending for the first time since their election.

Mr. H. S. Goodhart-Rendel, Mus.B. (Cantab.), M.A.Oxon. [*F*], to read a paper on *Rogue Architects of the Victorian Era.*

(Light refreshments will be served before the meeting.)

Session 1948-49. Minutes III
At the Third General Meeting of the Session 1948-49, held on Tuesday 11 January 1949 at 5.30 p.m.

Mr. Michael Waterhouse, M.C., President, in the Chair.

The meeting was attended by about 260 members and guests.

The Minutes of the Second General Meeting held on Tuesday 14 December 1948 were taken as read, confirmed and signed as correct.

The following members attending for the first time since their election were formally admitted by the President:

AS FELLOWS
K. J. Lindy, I. H. McLaren.

AS ASSOCIATES
F. R. Barnes, P. H. P. Bennett, Mrs. E. M. S. Bodgener, Miss M. K. Borland, P. H. Bosanquet, F. J. Bowering, Miss Jennifer Brooke, Miss B. J. Caldwell, M. M. Cooke, L. M. Cordwell-Smith, G. M. Davidson, Miss N. J. Dore, E. G. Doudney, Miss O. J. Durrant, B. A. F. Ellsmoor, B. G. Fender, R. J. G. Forestier-Walker, J. P. Foster, F. W. French, Miss J. L. Gardner, S. J. Gibbs, Miss J. M. Gilbert, Joseph Gonsalves, W. G. Gregory, S. T. J. M. Grimm, Miss P. J. Hammersley, J. A. Henderson, R. D. Henly, Miss J. E. Holmes, Miss Joan Howard, W. J. Hughes, H. R. Hyne, L. J. Johnson, Colin Laird, Miss Jane Lloyd, J. P. Lomax, S. J. McMullon, F. H. Marker, A. J. Mellor, Miss U. S. Meyer, Leonard Michaels, A. H. Millington, H. R. Morris, N. C. Nullis, G. M. Pearson, J. E. Potter, R. H. Potter, D. A. Pyment, K. F. Richardson, J. F. Rusted, Emanuel Shoolheifer, J. C. Smart, H. R. Stewart-Hunter, Miss P. J. Stillman, R. H. C. Thomerson, J. S. P. Vulliamy, C. F. Walker, G. H. Wilkinson, P. D. Windle, T. P. Wurr, D. S. Yates.

AS LICENTIATES
J. P. Kenna, Basil Marriott.

The Secretary having read the Deed of Award of Prizes and Studentships made by the Council under the Common Seal, the sealed envelopes bearing the mottoes of the successful competitors were opened and the names disclosed.

Mr. R. Gordon Brown [*A*] having read a paper on *Some Problems in Architectural Education*, a discussion ensued, and on the motion of Mr. Martin S. Briggs [*F*], Chairman of the R.I.B.A. Board of Architectural Education, seconded by Mr. Thomas E. Scott [*F*], Head of the Department of Architecture, Northern Polytechnic, a vote of thanks was passed to Mr. Brown by acclamation, and was briefly responded to.

The Proceedings closed at 7.55 p.m.

R.I.B.A. Reception 29 April 1949
There will be a Reception at the Institute on Friday 29 April 1949 from 8.15 p.m. to midnight. The President and Mrs. Waterhouse will receive the guests in the Henry Florence Hall from 8.15 to 9 p.m. and there will be dancing from 9 p.m. until midnight.

Tickets are 15*s.* each. In the first place members will be restricted to one guest each but they may give the names of further guests for whom tickets will be supplied should it prove that accommodation will be available. Application for tickets (with remittance) should be made as early as possible.

Full evening dress is preferred but in view of present-day conditions, members will be welcome in dinner jackets or uniforms or lounge suits.

British Architects' Conference, Nottingham, 29 June-2 July 1949
The next Annual Conference of the R.I.B.A. and its Allied and Associated Societies will be held at Nottingham from 29 June to 2 July 1949 inclusive, at the invitation of the Nottingham, Derby and Lincoln Architectural Society. Particulars of the programme will be issued in due course, and the application form for membership of the Conference will be sent to members with the March issue of the JOURNAL.

It is expected that there will be a large attendance of members from all parts of the country, and they are advised to arrange their hotel accommodation at the earliest possible moment, to avoid the risk of disappointment.

The Executive Committee of the Conference have furnished the list of hotels in and around Nottingham published on this page.

British Architects' Conference, Nottingham Hotel accommodation available for the nights of 29, 30 June, and 1 July 1949.

	ROOMS			TARIFF			Mins. from Conference Hqrs.
	With double beds	With twin beds	With single beds	Bed and breakfast double	Bed and breakfast single	Full daily per person	
NOTTINGHAM							
Black Boy Hotel, Long Row ..	2	2	10	17/-*	17/-*	29/-*	5
County Hotel, Theatre Quadrant ..	4	4	4	30/-*	15/-*	—	3
Flying Horse Hotel, The Poultry ..	—	—	10	—	13/6	24/3	5
Gresham Hotel, Carrington Street..	6	—	10	14/-*	14/-*	—	15
George Hotel, George Street.. ..	6	6	6	From 16/6*	From 16/6*	—	10
Victoria Station Hotel, Mansfield Road..	12	—	16	33/-*	16/6*	28/6*	3
Welbeck Hotel, Mansfield Road ..	6	—	10	16/-*	16/-*	25/-*	4
DERBY							
Midland Hotel..	10	—	10	36/6 and 40/-	19/- and 21/-	31/- and 33/-	40
York Hotel	—	—	3	—	15/-	25/-	40
GRANTHAM							
George Hotel	4	5	12	16/-	16/-	28/-	45
LEICESTER							
Grand Hotel	3	4	6	15/-*	15/-*	25/6*	45
LINCOLN							
Saracen's Head Hotel..	10	10	10	—	—	—	60
White Hart Hotel	10	10	10	—	—	—	60
NEWARK-ON-TRENT							
Robin Hood Hotel	—	3	—	23/-	11/6	33/9	40
OLLERTON							
The Hop Pole Hotel	3	2	4	12/6	12/6	23/-	40

* Plus 10 per cent surcharge

In addition the following hotels are available, but have stated that they cannot reserve a specific number of rooms, and intending Conference members should write to these hotels for information: Albert Hotel, Nottingham; Angel and Royal Hotel, Grantham; Friary Hotel, Derby; Ram Hotel, Newark-on-Trent, Notts; Hutt Hotel, Newstead Abbey, Linby, Notts; Unicorn Inn, Gunthorpe, Notts.

BOARD OF ARCHITECTURAL EDUCATION

R.I.B.A. Intermediate Examination, November 1948
The R.I.B.A. Intermediate Examination was held in London, Plymouth, Manchester, Leeds, Newcastle, Edinburgh and Belfast from 5 to 11 November 1948

Of the 509 candidates examined, 191 passed and 318 were relegated. The successful candidates are as follows:

*Abbott, D. S.	*Blampied, M. R.
Aldridge, S. E.	*Bond, B. S.
Allen, G. J.	Boots, M. P.
Andrew, Matthew	Bousell, R. E.
*Ashley, Raymond	*Bowden, D. L.
Austin, J. A.	Boyd, D. T.
Austin, T. J.	Bradley, M. H.
Baker, R. O.	*Branch, D. C.
Beales, J. W. (Miss)	Bridges, P. S. G.
Beckett, Sir Martyn G.	*Broome, J. H.
	Brown, Colin
Birchall, R. J.	Browne, G. R.
Bishop, A. C.	*Burnhill, C. S.
Blair, K. V.	Campbell, D. W. I.

Cash, G. J.
Chapman, C. C. M. (Miss)
*Chapman, L. R.
*Chidlaw, R. I.
Chignall, E. G.
*Chitty, D. W.
Clark, A. E.
Clark, K. H. D.
Clendenning, W. M.
Clibbon, S. C. (Miss)
Cocker, P. S.
Coe, S. P.
Collins, J. E.
Collinson, P. A.
*Connor, L. J.
*Cook, Anthony
*Cook, K. D. A.
Cooper, D. J.
Crofts, F. A.
Dabner, M. R.
Darlington, Edgar
Davies, Oscar
*Dent, R. C.
Dickens, Jill (Miss)
Dornan, William
*Dumpress, P. W.
Dunster, Peter
*Dutton, R. T. H.
*Eastcott, D. P.
Eeles, I. J. N.
Elliott, A. A. A.
Elliott, E. J.
Evans, P. J.
Evans, W. F.
Feeney, M. G.
Fergusson, G. W.
FitzGerald, J. D.
Fleck, H. F.
Foster, L. T.
Gatling, H. W.
Glossop, P. F. R.
Gold, K. G.
Gotch, C. L.
Green, B. G.
Grocott, Ronald
Guilmant, P. R.
*Hampton, William
Handcock, J. H.
Harding, K. J.
Hargreaves, R. D.
Harper, A. S.
Harris, R. F.
*Haynes, R. I. E.
Heap, J. L.
Heatley, M. D.
Hemingway, P. G.
*Hewitt, P. W.
Higgs, K. G.
Hollis, J. F.
Howitt, J. P.
Hunneyball, D. T.
*Ingram, L. B.
Jackson, A. D.
Jenner, G. J.
*Joel, S. V.
Johnson, John
Jolley, F. C. E.
Jones, K. G.
Jones, P. S.
Jones, R. M.
*Jones, Stanley
*Kilner, Allen
*Kirby, C. R.
Levett, Vivian
Levy, A. B.
Lewis, B. C.
*Lewis, J. E.
*Looker, K. P. J.
*McEwan, Alexander
McKnight, K. R. B.
Melvin, K. A. C.
Morling, William
*Mountford, J. C.
Mundell, G. H.
Packer-Doust, A. E. (Miss)
Paine, J. W.
Paish, Yvonne (Miss)
*Pannett, R. C.
*Parry, G. H.
Partridge, G. W.
*Payne, Ronald
Pendrey, J. G.
Plant, B. M. (Miss)
Podger, J. M. (Miss)
Prakash, Aditya
*Prichard, Leonard
*Prowse, E. J.
Rice, J. A. P.
*Richards, D. J.
Richards, G. V.
*Robinson, F. A.
Rodgers, K. J. (Miss)
Rust, Ronald
Sames, V. J.
Sanger, N. J.
Scales, M. F. (Miss)
Scott, K. C.
Sergeant, D. L. T.
Shailer, P. F.
*Sharman, S. C. G.
*Sharrock, A. R.
*Shaw, Eric
Shoolbread, A. H.
*Simpson, R. I.
*Smith, J. E.
Smith, K. M.
*Smith, S. O.
*Spicer, G. E.
Spiegel, R. F.
*Spray, G. F.
Stanley, R. A.
*Statham, J. D.
Stephenson, D. B.
Stickland, D. C. (Miss)
Stickling, R. W.
*Stott, D. T.
*Stringer, P. H.
*Sykes, L. D. F.
Tanner, M. M. (Miss)
*Thurman, R. D.
*Tippens, L. O.
Toms, V. J. (Miss)
Torrance, I. McA.
Towler, E. R.
*Tricker, D. J. G.
Trinder, W. T.
Tritton, W. H.
*Truesdale, S. A.
Turnbull, J. A.
Vane, D. C. W.
*Venables, E. L.
*Wakeham, G. W.
Wakeham, L. A.
Wallace, J. R.
Ward, F. H.
Ward, J. E.
*Warman, N. L.
*Watson, L. E.
Watt, D. M.
Welsh, R. G.
Wheeler, M. S. H.
*White, G. A.
*White, L. G.
Whitehead, E. F.
Whitmore, F. W.
Whittenbury, June (Miss)
Wilde, P. H.
*Wilson, Donald
Wilson, Michael
Winder, Peter
*Wingrave, E. A.
Winters, E. R.
Woodworth, G. F.
Wright, D. C.

*Subject to approval of History Thesis or Theses.

The following candidates have also completed their qualifications and have now passed the Intermediate Examination:

Benham, A. T. J.
Drury, B. W.
Ross, D. H.
Spencer, J. V.
Thresher, R. N.

R.I.B.A. Examinations: Final Examination, December 1948

The Final Examination was held in London, Edinburgh and Belfast from 1 to 10 December 1948.

Of the 252 candidates examined, 94 passed as follows:

Passed Whole Examination	38
Passed Whole Examination, subject to approval of Thesis	39
Passed Whole Examination, subject to approval of remaining Testimonies of Study and Thesis	1
Passed Part I only	16
	94

158 candidates were relegated.

The successful candidates are as follows:

Whole Examination

*Adams, K. G.
*Alaway, K. H. M.
Andrews, C. G.
Austin, D. H.
*Bailey, Duncan
*Barnes, H. S.
*Bateman, J. F.
Bent, E. L.
Bestwick, Dennis.
*Blight, Ernest
Box, J. A. H.
Bradford, P. W. G.
*Bramley, J. G.
Bravington, F. B. C.
*Burstow, R. E.
*Carver, K. M.
*Chipperfield, J. E.
Clarke, J. F.
*Clarke, P. A.
*Cleverly, L. M.
*Cull, D. A.
*Cumming, G. S.
*Dunnett, Frank
*Elder, E W. (Miss)
Feaster, J. M. (Miss)
Fleming, M. A.(Miss)
†Gardner, V. W. R.
Gibson, G. K.
*Glanfield, J. R.
*Glen, Donald
Goatley, G. F.
*Goddard, A. G.
*Goss, N. A.
Grey, G. A.
Griggs, C. P.
*Hayes, T. B.
*Hayler, M. E.
*Hey, R. J.
*Higgs, P. L.
*Hollamby, E. E.
Hubble, J. B.
*Hudson, J. R. H.
Hughes, G. M.
Jarvis, N. K.
Johnson, D. B.
Kench, A. J.
Kershaw, Stanley
*Lingard, B. H.
McCormick, John
McCready, S. V. W.
*McCulloch, A. G.
*Maddox, H. V.
Martin, Hermione (Miss)
*Pattenden, B. V.
*Peake, J. S.
Proctor, W. D.
Purdy, I. M.
Rendle, J. H.
*Savage, B. A. W.
*Slattery, L. T.
*Smith, W. K.
Sniders, Rosa (Miss)
Sweetman, E. C.
Tavill, Dennis
Thompson, D. A.
*Thorne, G. E.
*Trindall, L. W.
Twist, Eunice (Mrs.)
Vaughan-Ellis, G. R.
Vivian, J. V. J.
*Wadsworth, J. E.
Walker, Brenda (Miss)
Wallwork, A. J. A.
Warner, Ivor
Waters, G. A.
*Welsh, C. G.
*Wright, C. W. H.
Yates, Arthur

Part 1 only

Carlick, R. E.
Carter, G. B.
Cooper, Kenneth
Edwards, Ronald
Hanasz, M. I.
Henneberg, W. K.
Hothersall, G. L.
Marsh, H. G.
Oakley, D. F.
Poray-Swinarski, M. W.
Sheldon, J. F.
Smith, S. F.
Sperry, R. G.
Vale, D. R.
Vinter, Tom
Wondrausch, W. A.

* Subject to approval of Thesis.

† Subject to approval of Thesis and remaining Testimonies of Study.

The Special Final Examination, December 1948

The Special Final Examination was held in London, Edinburgh and Belfast from 1 to 10 December 1948.

Of the 334 candidates examined 82 (10 in Part I only) passed.

252 candidates were relegated.

The successful candidates are as follows:

Whole Examination

Alcock, Harold
Alexander, William
Arnold, P. J.
Backhouse, E. J.
Badger, Reginald
Barker, A. J.
Bashforth, Arthur
Belam, L. H. G.
Bell, H. E.
Best, H. S. T.
Bick, D. H.
Braine, D. J.
Burton, R. R.
Cathcart, S. B.
Cattermoul, H. S.
Collins, D. G.
Crisp, J. W.
Davies, C. E.
Davis, A. H.
Elder, F. H.
Fer, R. E. W.
Field, H. C.
Garner, M. J.
Garry, Oscar
Gay, G. R.
Granger-Taylor, Jerry
Green, B. W.
Henry, C. T. G.
Hepworth, H. F.
Higginbotham, H. W.
Hill, J. C.
Holt, R. J.
Howell, D. R.
Irwin, W. H.
Key, P. S.
Khachadourian, L. Y. M.
Lackie, G. T.
Long, E. G.
MacDonald, William
McMordie, H. M.
McSweeney, P. L.
Manning, P. W.
Maxwell, W. B.
Morris, I. E.
North, D. E. V.
O'Dwyer, J. M.
Parrish, Horace
Penson, John
Phillipson, E. E. J.
Pittman, G. R.
Radford, John
Raiker, W. G.
Richmond, A. J.
Rigler, J. S.
Robbins, W. H. L. D.
Robinson, E. J.
Robson, K. L.
Rowsell, A. J.
Roycroft, R. J.
Russell, C. S.
Sharpe, D. W.
Smith, D. G.
Smith, J. L. F.
Sunavala, B. A.
Sutton, R. W.
Sweetapple, E. F.
Taylor, Harry
Twohig, D. E.
Viner, W. J.
Wilcox, Harold
Williams, R. H.
Wilson, F. W.

Part 1 only

Beevis, J. H.
Cullum, D. G.
Davies, H. L.
Gallagher, H. H. A.
Hopkins, R. A.
Keatley, R. A.
McAfee, R. M.
Mallett, A. E. L.
Oldham, Harold
Tandy, C. R. V.

The following candidates have also passed the Special Final Examination:

King, T. E. J.
Reid, H. M.

The Examination in Professional Practice for Students of Schools of Architecture Recognized for Exemption from the R.I.B.A. Final Examination

The Examination was held in London and Edinburgh on 7 and 10 December 1948. Of the 19 candidates examined, 15 passed and 4 were relegated.

The successful candidates are as follows:

Bell, W. A.
Evans, H. G.
Forsyth, P. O.
Gould, G. D.
Johnston, H. N. T.
Lees, A. A.
Lowe, R. H. B.
Mair, J. A. D.
Moscardini, Anthony
Prichard, F. L.
Raine, Alan
Russell, D. B.
Young, J. R. S.
Young, R. H.

R.I.B.A. Intermediate Examination—November 1948
The questions set at the Intermediate Examination held in November 1948 have been published and are on sale at the Royal Institute, price 1*s.* (exclusive of postage).

Building Surveying Examination
The R.I.B.A. Examination qualifying for candidature as Building Surveyor under Local Authorities will be held at the R.I.B.A. on 27, 28 and 29 April 1949.

Applications for admission to the examination must be made not later than 4 March 1949 on the prescribed form to be obtained from the Secretary, R.I.B.A.

R.I.B.A. Diploma in Town Planning
Mr. Maurice B. Patience [*A*], having passed the qualifying Examination, has been awarded the R.I.B.A. Diploma in Town Planning.

Examination for the R.I.B.A. Diploma in Town Planning
At the Examination held in July 1948 the following were successful and have been awarded the R.I.B.A. Diploma in Town Planning: Kenneth Dodds [*A*], Newcastle-upon-Tyne, John Philip Jackson [*A*], Chester.

ALLIED SOCIETIES

Changes of Officers and Addresses
Royal Australian Institute of Architects' New South Wales Chapter. President, Mr. Adrian O. Ashton [*A*], 27 Hopetoun Avenue, Mosman, Sydney, N.S.W. Secretary, Mr. J. D. Storrie, Barrack House, 16 Barrack Street, Sydney.
Royal Victorian Institute of Architects. Hon. Secretary, Mr. H. J. Tribe [*A*], 401 Collins Street, Melbourne.
The Royal Institute of the Architects of Ireland. Hon. Secretary, Mr. Austin P. Meldon, B.Arch. M.R.I.A.I., 8 Merrion Square, Dublin.

Berks, Bucks and Oxon Architectural Association Annual Dinner
The President, R.I.B.A., Mr. Michael Waterhouse, M.C., was Guest of Honour at the Eighteenth Annual Dinner of the Berks, Bucks and Oxon Architectural Association held at Oxford on 14 January 1949, over which Mr. H. F. Hurcombe [*F*], President of the Association, presided. The company included the Mayor and Mayoress of Oxford, the Vice-Chancellor of Oxford University and Mrs. Lowe, the Hon. Quintin Hogg, M.P., and Mrs. Hogg, the Presidents of the Birmingham and Five Counties and Hampshire and Isle of Wight Architectural Associations, the President of the Berks, Bucks and Oxon Branch of the Royal Institution of Chartered Surveyors, Mr. C. D. Spragg (Secretary, R.I.B.A.), and the President and Vice-President of the local branches of the National Federation of Building Trades Employers.

Following the loyal toast, the Vice-Chancellor proposed the toast of 'The Royal Institute of British Architects'. Mr. Waterhouse, responding, said that, while Oxford needed growth, it was for architects to see that the growth was good. 'There are two particular things in which I wish you well,' he added. 'One is the success of the University Theatre, and the other is the preservation of The High, by whatever planning it is achieved.'

The Hon. Quintin Hogg, M.P., proposed the toast 'Architecture,' and Mr. T. Lawrence Dale, F.R.I.B.A., responded.

The President, R.I.B.A. presented to Mr. H. S. Rogers, J.P., M.A., F.S.A. [*F*], the R.I.B.A. Architecture Bronze Medal for his design of St. Luke's Church, Cowley, Oxford, adjudged the outstanding building in the three counties for the period 1936-46; a replica of the medal was presented to the Vicar of Cowley.

Mr. H. F. Hurcombe, responding to the toast of 'The Berks, Bucks and Oxon Association', proposed by Mr. H. P. Rosewarne, F.R.I.C.S., mentioned the effects the Town and Country Planning Act would have on development generally, and the necessity for it being administered by competent and properly trained persons. Mr. David Beecher, M.A. [*F*], Chairman of the Oxfordshire Society of Architects, proposed the toast 'Our Guests' to which the Mayor of Oxford responded.

The Suffolk Association of Architects' Annual Dinner
Mr. Martin J. Slater [*A*], President of the Suffolk Association of Architects, presided over a dinner held at Felixstowe on 19 January to mark the formation of the Association twenty-one years ago. The President, R.I.B.A., Mr. Michael T. Waterhouse, M.C., and Mr. C. D. Spragg, C.B.E., Secretary, R.I.B.A., were among the guests. Also present were the Earl of Cranbrook, the Bishop of St. Edmundsbury and Ipswich, the Mayor of Ipswich, and many other representatives of the county and the various local authorities.

The toast of 'The R.I.B.A.' was proposed by Mr. Slater, and responded to by the President R.I.B.A. Mr. Waterhouse, replying, said that while a vast amount of work required to be carried out the volume of work to be done at any given time was controlled by the supply of materials and labour available. There might be some who considered that materials were being used in the wrong way. There could be either control or freedom, and if complete freedom were given at this moment there would be a scramble, and under present conditions it was better to have a controlled policy than a scramble. Mr. Waterhouse also referred to the Town and Country Planning Act, the import of which was probably not appreciated by a large section of the community.

The toast of 'The Suffolk Association of Architects' was proposed by Mr. A. G. Berry [*F*], President of the Norfolk and Norwich Association of Architects, and responded to by Mr. Leslie Barefoot, G.C. [*A*]. Mr. Maurice Chesterton [*F*] proposed the toast of 'The Guests', and this was responded to by the Earl of Cranbrook and the Bishop of St. Edmundsbury and Ipswich.

During the evening the R.I.B.A. President presented a replica of the Past-President's badge of the Association to Mr. E. J. Symcox [*F*].

COMPETITIONS

Proposed Fleet Air Arm Memorial of the 1939-45 War at Lee-on-Solent, Hampshire
The Imperial War Graves Commission invite architects who are ex-serving full time members of His Majesty's Forces to submit designs in competition for the Fleet Air Arm Memorial of the 1939-45 War, which they propose to erect on a site on the sea front at Lee-on-Solent.
Assessor: Mr. Edward Maufe, R.A. [*F*].
Premiums: £100, £60 and £30.
Last day for submitting designs: 20 May 1949.
Last day for questions: 18 March 1949.

Conditions may be obtained from The Secretary, Imperial War Graves Commission, 32 Grosvenor Gardens, S.W.1. The deposit is £1. Applicants for the Conditions *must* state:
(*a*) Their architect's registration number.
(*b*) The branch of H.M. Forces in which they served.

COMPETITION RESULT:—
Leigham Court Road Housing Scheme
1. W. F. Howard [*F*].
2. Mrs. M. H. Forrest and J. B. Forrest [*A*/*A*].
3. Gollins, Melvin and Partners [*A*/*A*].
Highly Commended: D. Stratton Davis [*A*], of Stratton Davis and Yates, F.S.A. [*F*/*F*/*A*]; Glyn Roberts [*A*]; John D. Cordwell [*A*] and F. S. Knight [*A*] and Miss June S. Lee-Jones [*A*] and W. F. Mullins [*A*]; Reginald Pianca [*A*]; Riches and Blythin [*F*]; Scherrer and Hicks [*F*/*F*] in association with Harrison and Seel [*A*/*A*]; I. H. Horsburgh [*A*]; Leslie P. Collins [*L*]; Kenneth Easton [*A*]; Peatfield, Mayo and Bodgener [*A*/*A*]; Howes and Jackman [*F*/*F*]; Harry Moncrieff [*F*], of Co-operative Planning Ltd.; J. M. Austin-Smith and Mrs. I. L. E. Austin-Smith [*A*/*A*].

GENERAL NOTES

R.I.B.A. Golfing Society
The Society is arranging an interesting fixture list for the coming season, including amongst their four meetings, a golfing week-end. It is also hoped to add further matches to the Society's annual fixtures with the R.I.C.S. Golfing Society and the London Master Builders' Association Golfing Society.

Will all members and students wishing to join the Society please remit the annual subscription of 10*s.* to the Honorary Secretary and Acting Treasurer, who will shortly be sending out the printed fixture cards.

The following officers have been re-elected for 1949. *President:* Sir Giles Gilbert Scott, R.A. [*F*]. *Committee:* Captain, John Grey [*F*]. Messrs. W. R. F. Fisher [*F*], H. St. John Harrison [*F*]. Hon. Secretary and Acting Treasurer, E. H. Firmin [*A*], 10 Manchester Square, London, W.1.

Town Planning Institute.—Rees Jeffreys Triennial Lecture on Road Design and Layout
The first Rees Jeffreys Triennial Lecture entitled *Safety as a Factor in Road Design, Construction and Layout*, will be given by Mr. E. B. Hugh-Jones, M.C., B.Sc., M.I.C.E., at the Institution of Civil Engineers, Great George Street, Westminster, London, S.W.1, on Thursday 5 May 1949 at 5.30 p.m.

Arrangements for the lecture have been made on the recommendation of the committee appointed to advise the Town Planning Institute thereon, on which the R.I.B.A. is represented. Admission to the lecture will be free.

Leverhulme Research Fellowships 1949
Application is invited for Fellowships and Grants in aid of research. The Fellowships and Grants are intended for senior workers who are prevented by routine duties or pressure of other work from carrying out research. They are limited to British-born subjects normally resident in the United Kingdom. In exceptional circumstances the Trustees may waive the condition as to residence.

The Trustees are also prepared to consider applications from groups of workers engaged upon co-operative programmes of research particularly from those engaged upon long-distance programmes or in institutions in which the normal facilities for research have been curtailed by the war. The duration of the awards will not normally extend over more than two years or less than three months, and the amount will depend on the nature of the research and the circumstances of the applicant.

Forms of application may be obtained from the Secretary, Dr. L. Haden Guest, M.C., M.P., Leverhulme Research Fellowships, 7 Bedford Row, London, W.C.1. Applications must be received on or before 1 March 1949.

Obituary

William Godfrey Newton, M.C., M.A. [*F*], died suddenly in London on 11 January, aged 63. He was born on 1 December 1885 and was the youngest son of the late Ernest Newton, R.A., a past-president of the R.I.B.A.

At the outbreak of the first World War he joined the Artists Rifles as a private, later obtaining a commission in the 1st/23rd London Regiment, serving with the battalion until 1917, when he was appointed A.D.C. to the Chief of the General Staff at G.H.Q. He returned to the line, and in 1918 commanded the 1st/21st London Regiment, attaining the rank of lieutenant-colonel in 1919, and being awarded the Military Cross. Returning to practice in 1919, he was for some years editor of the ARCHITECTURAL REVIEW. He was appointed Lecturer on Architecture in the University of Oxford, and succeeded his friend Hubert Worthington (recently knighted) as Professor of Architecture at the Royal College of Art.

All Mr. Newton's work was distinctive—he was a 'modernist'—combined with a respect for tradition inherited from his well-known father, Ernest Newton. His practice was varied, but he specialized in school architecture: his work at Marlborough, Uppingham, Bradfield, Radley and Aldenham probably resulted in his selection as architect for the new Merchant Taylors' School at Sandy Lodge, Herts. His other works included a housing scheme at Otford, housing schemes at Woolwich and Shirehampton, the County Fire Office in Piccadilly Circus, the Anglican Church at Alassio, the Territorial Headquarters in Albany Street, new buildings for Worcester College, Oxford, the head office of the Croydon Gas Company, a senior school for the West Riding, and a number of country houses.

Mr. Newton has done sterling work for the architectural profession. President of the Architectural Association in 1921, he served on the R.I.B.A. Council from 1920-23, and again during the current session as President of the Wessex Society of Architects. He was at one time a particularly valuable member of the Board of Architectural Education, and when he went to live at the Old Rectory, Manningford Abbas, Wiltshire, just over twenty years ago, he was for some years president of the Wiltshire and Dorset Society of Architects. At Manningford Mr. and Mrs. Newton welcomed many friends at their home and the grounds of the Old Rectory were often made available for charitable functions. Appointed a Justice of the Peace in 1941, Mr. Newton was a member of the Pewsey Bench of Magistrates.

A scholarly critic, he wrote as fluently as he spoke. His literary work included *The Architectural Contribution of Imperial Rome* (1912), *Prelude to Architecture* (1925), *The Work of Ernest Newton, R.A.*, and while serving in France he produced a valuable handbook of *Military Landscape Sketching*, the result of his own observations and experiences in the line.

Mr. H. M. Fletcher [*F*] writes:

'The death of William Godfrey Newton has come as an unexpected shock to all his friends. Sudden death may be merciful to him whom it takes, but it must be full of pain to those whom it leaves behind. Apart from personal grief, we can not but lament the loss of a fine artist at the height of his career, with years, as it seemed, before him of work the richer for each year's experience.

'He lived his life fully and beneficently, never thrusting himself forward, but ready, once his interest had been aroused and his approval gained, to undertake anything he was called upon to do, to do it without noise or confusion, and to put into it the best of his admirable powers. Essentially, as all would agree, a man of peace, he entered the 1914-18 war as private and finished as lieutenant-colonel with M.C. Essentially an architect, he made his mark as soldier, as editor, as lecturer, as teacher and director of an unusual architectural school, and played a leading part in many of the activities of Wiltshire, the county in which he made his home.

'He was born and brought up among architects and architecture. Ernest Newton, his father, one of the best beloved architects of his day, was President R.I.B.A. during three years of the first war, from 1914 to 1917, and Royal Gold Medallist in 1918. At a time when few architects could or would resist the temptation of over-designing, his elegant, reticent, highly-finished houses stood out with special distinction. Willie Newton was educated at Marlborough and Oxford in the old classical tradition of "humaner letters". This has received and is receiving many hard knocks in the educational battlefield of our day. Doubtless there are many for whom it is but vexation of spirit, but for others it is an incomparable schooling in exactness, lucidity and sense of proportion, culminating in the enthusiastic perception of what is best in life and art. Newton was one of these, and there is no doubt that he felt and acknowledged his debt to "the classics". Not that he was an academic architect, in whom the power of critical appreciation, the historical sense and the urge to write are developed at the expense of the critical faculty. Far from it, he was a designer, a planner and a builder, whose works were conceived in terms of fine building, though his architectural thinking was clarified by the lessons he had learnt from his literary training.

'His early work naturally shows his father's influence, but he soon had larger problems to deal with than the domestic requirements of individual clients. With the Marlborough Speech Hall, deservedly won in a competition between Marlburian architects, he started the long series of his works for schools and colleges. The influence of Wren and the Georgians was strong in him to the end, but he never again after this first building had recourse to a fully wrought, free-standing classical order as a basis for design. It is needless to look to the economic pinch of our day for an explanation; his sturdy independence and his growing sense of the need for a certain modernity of outlook provide it. Nevertheless, the Speech Hall wears very well, not only for its external and internal beauty, but for its admirable acoustics and its carefully devised setting.

'Before long he was in demand for scholastic buildings in many parts of the country, and his successes at Uppingham, Radley, Aldenham and elsewhere gave him experience and prepared him for his finest work, the Merchant Taylors' School at Sandy Lodge. He rose to the height of the opportunity. The great group of buildings is disposed with a blend of formality and informality, of the domestic and the stately, neither too monumental nor too institutional, but everywhere spacious and genial, which must surely wear a friendly look to the boys who live there. Working in a totally different idiom, he seems to have recaptured the same harmony in disharmony, the same friendliness that delights us in the Great Court of Trinity. The greater units stand up and take their place among the lesser without crushing them or overwhelming. In a general view the effect is one of serene strength, with hardly any modelling or detail to worry the surface of the large masses; coming nearer, you find that the treatment of the brickwork, handled by this time with the assurance of a past master, gives a varying interest to every piece of the walling.

'In the Science Laboratories at Marlborough he had already experimented boldly in the treatment of concrete for external use. In the great hall of Merchant Taylors he went a step further, and showed how concrete more highly wrought, with different aggregates and colours, polishing and other devices, could be refined and made fit for internal treatment on a large scale. He did admirable pioneer work in this direction, which has not received the notice it deserves. He was never content to stand still, and was always reaching forward to something else; and his power of reasonable invention to cope with unaccustomed conditions was soon to be tested to the full.

'In 1944 he was called upon to go to Uganda and scheme the new buildings for Makerere College, lately founded for the education of African students. At the same time he was asked to advise on the extension of the Gordon Memorial College at Khartoum. The results are of extraordinary interest, showing the impact of equatorial problems on his flexible and unprejudiced mind. At Khartoum the sun is merciless, and the light is multiplied by reflection from the desert sand, hardly broken by vegetation, until it is blinding even for natives, and must be drastically screened for any kind of studious indoor work to be done. Newton's solution to the problem was indirect lighting carried to the extreme of indirectness. The outside walls, windowless, are crowned with shelf cornices of great projection; the rooms are lighted by windows looking into deep niche-like recesses which the sun can barely penetrate, or into open corridors passing from side to side of the building. These recesses and the ends of these corridors are finished under the cornices by plain pointed arches suggesting the native Arab architecture.

'At Makerere, although it stands almost on the equator, the reflection is absent, the light is modified by lush vegetation, and the design, though similar in the main, is also modified by the changed conditions. Some windows appear in the outer walls, individually protected from the vertical rays by solid horizontal shelves or louvres, as well as by the overhang of the cornices. It is tragic that he was not spared to carry these strikingly original and reasonable buildings through to completion.

'It will be clear that it is not easy in post-war conditions to see much of Newton's work, scattered as it is over wide areas. The most accessible for Londoners is the Anti-Aircraft Headquarters at the north end of Albany Street, near the Gloucester Gate of Regent's Park. It is a small building, but shows well some of the characteristics of his later work—the easy transition from the domestic part to the larger scale of the drill hall, the simple graceful iron gate at the entrance, the careful handling of concrete, which even the London climate has not succeeded in making shabby, and above all the brickwork.

'Willie Newton was the best of companions, kindly, vivacious and genial and with a ready wit, inherited from his father which, though a merciful man, he could aim unerringly at pomposity. He influenced others strongly, but with so light a touch that perhaps neither he nor they were aware of it. Every architect who knew him was his friend.'

Sir Hubert Worthington, A.R.A. [*F*], writes:

'As a travelling companion with Willie Newton on many a happy journey I write a few words on holidays spent together, for such journeys are vital factors in an architect's life and work.

'Towards the end of the 1914-18 war, we decided that, when it was over, we would refresh our minds by journeys to Italy and

France, and these wanderings became an important element in the post-war years, when we wished to eliminate war obsessions, and get inspiration from the great masters of the past, whose work had endured the test of time and political upheaval.

'He was an ideal travelling companion, being a rare scholar with an enquiring and sensitive mind. He was full of quiet fun, and delightful wit, which added spice to conversation and discovery. His sketch-books were packed with carefully selected details; his water-colours were fresh and full of charm. He had, moreover, an unusual gift for the written word, and placed on record these holiday ventures in articles in the ARCHITECTURAL REVIEW of which he was then editor.*

'We generally travelled as a bachelor party of four. We soaked ourselves in the glacier of Doric, at Paestum and Segesta, Selinonte and Girgenti, and again at Arles and Nimes in the Roman monuments of Provence. With delight we sought out Baldassare Peruzzi of Siena, Michele Sanmicheli of Verona, Antonio da San Gallo the younger, and many a Renaissance humanist.

* It is refreshing to read Montepulciano, a Tuscan hill town in the *Architectural Review* of 1921, or Verona in the *Architectural Review* of 1922, and his little book *Prelude to Architecture* embodies much of his architectural philosophy.

'Here are his own words: "There are many ways of travelling. Some, in three weeks, will see half Italy, no doubt, and bring home a memory of feverish departures and never-ending museum corridors. We chose the more tranquil part, and, lingering at ease about the streets and vineyards of this Tuscan hill town, have perhaps brought home a little of the dry fragrance of days that are past, an echo here and there of old music, a sense of the beauty and ancientness of Italian life, where man is but for a day, but the things he makes, and the thoughts he thinks, are a possession for all time".'

Membership Lists

ELECTION: 11 JANUARY 1949

The following candidates for membership were elected on 11 January 1949:

AS FELLOWS (7)

Alleyn: Justin Henry, B.Arch. (L'pool) [*A* 1934].
Cordiner: Thomas Smith [*A* 1928], Glasgow.
Goodesmith: Walter Moore, A.M.T.P.I. [*A* 1932].
Jenkin: David Cynddylan Hughes, B.A. (Arch.) Lond., A.M.T.P.I. [*A* 1937].
Mansel: John William Morton, T.D., Dip. Arch. (L'pool) [*A* 1935].
Tyler: Eric Brian [*A* 1926], Chichester.
White: Cyril George, F.R.I.C.S. [*A* 1943].

AS ASSOCIATES (56)

Barber (now Barbour): Frederick William, Shrewsbury.
Beazley: Elisabeth Dora (Miss).
Blake: Henry John, Hitchin.
Boswell: George Leonard, Derby.
Bowman: Christine Mary (Mrs.), Manchester.
Boyd: Henry William Kenneth, Croydon.
Brown: John Kininmonth, Carlisle.
Capey: Alan George, Stoke-on-Trent.
Carter: Reginald Edward, Shirley, Surrey.
Chandler: Leslie, Portsmouth.
Corrie: Margaret Baxter (Miss), B.A., Sheffield.
Cowper: John Edwin, Kidderminster.
Cox: Sheila (Miss).
Davis: Bernard Roderick, Liverpool.
Duncan: Neil Forsyth, B.Arch. (Rand).
Edwards: John Henry, West Bromwich.
Eggleston: Roy, Sunderland.
Evans: Kenneth Halstead, Liverpool.
Fogg: Roy Henry, Ambergate.
Foxall: John Howard, Cardiff.
Frears: John, Carlisle.
Goom: Noel Joseph, Lowestoft.
Gordon: Alexander John (Major), Dip.Arch. (Dist.) (Wales), Mumbles, Glam.
Greenwood: John Lawrence, Guildford.
Grindley: Elizabeth Marjorie (Miss), Stone.
Hatton: Peter Herbert, Dip.Arch. (Lond.).
Hay: Ian Gordon McHattie, Inverness.
Hepburn: James Arthur, B.A. (Arch.).
Hughes: Gwynne David Lewys, Dip. Arch. (Wales), Cardiff.
Hussain: Khateeb Zakir.
Igel: Samuel Markus.
Jones: Edward Francis, Holyhead.
King: Kenneth John, Birmingham.
King: Ronald Sidney Hatton.
Knight: William, Dip. Arch. (Dist.) (L'pool), Liverpool.
Lang: Geoffrey, Preston.
Levin: Ezra.
Lindley: Frank Denys, Sheffield.
Lobban: William, Renfrew.
Moreton: John Loftus, Lt.-Comdr. R.N. (Retd.)
Mortimer: Robert Shaw, Bradford.
Newland: Albert Christopher, Stafford.
Park: Richard Hugo Dickinson, B.A. (Sheffield), Lincoln.
Pistorius: Ronald Arthur, Dip.Arch. (Rand).
Robertson: John Kirkland, Welwyn Garden City.
Rodgers: Paul Heaton, B.Arch. (Hons.), (L'pool), St. Helens.
Saville: George Alfred, Selby.
Simkins: George Francis Beale.
Smith: James Ernest, High Wycombe.
Snelson: Charles Geoffrey, Manchester.
Snell: Jack Stanley Saxon, Purley.
Sprince: Hugh Vincent.
Stenson: William Henry Guilland, M.C.
Sutton: Alfred Kenneth, B.Arch. (L'pool), Wallasey.
Williams: Felicity Ann De Laune (Miss).
Woolfenden: Peter.

AS LICENTIATES (14)

Allen: Theo Tracy, Rochester.
Dicketts: Harry James.
Hadfield: Colin, Sheffield.
Harmer: Clarence Gilbert.
Lynn: Henry John, Margate.
Millwood: Alfred Mawson, M.C.
Murphy: Lawrence Patrick.
Reeve-Smith: Walter Leslie.
Roberts: Harry Herbert George.
Staples: Frederick Arthur Robert.
Swaine: Edmund Henry.
Turner: Keith Allerton.
Vanstone: Frederick William Elliott.
Woodiwiss: Brian, Lincoln.

ELECTION: 8 MARCH 1949

An election of candidates for membership will take place on 8 March 1949. The names and addresses of the candidates with the names of their proposers, found by the Council to be eligible and qualified in accordance with the Charter and Bye-laws, are herewith published for the information of members. Notice of any objection or any other communication respecting them must be sent to the Secretary, R.I.B.A., not later than Saturday 5 March 1949.

The names following the applicant's address are those of his proposers.

AS FELLOWS (3)

Hopkinson: Albert Cyril, M.A., A.M.T.P.I. [*A* 1938], Ministry of Works, Abell House, John Islip Street, S.W.1; 52 Southway, Totteridge, N.20. Miss Ruth Ellis, A. F. B. Anderson, L. H. Bucknell.

Smith: Sydney Walter John, A.M.T.P.I. [*A* 1938], Messrs. Stewart and Hendry, 90 Fenchurch Street, E.C.3; 'Yendens', Church Road, Chelsfield, Kent. H. D. Hendry, G. A. Rose, C. W. Fowler.

Watt: John [*A* 1929], Chief. Architect, Surveyor's Dept., County Borough of Preston; 'Sion Hill', 23 Longridge Road, Ribbleton, Preston. George Crossley, F. Mellor, F. R. Steele.

AS ASSOCIATES (29)

The name of a school, or schools, after a candidate's name indicates the passing of a recognized course.

Bailey: Barbara Mary (Miss), Dip.Arch. (Mancr.) [Final], 25 Rutland Road, Ellesmere Park, Eccles, Lancs. A. Douglas Jones, F. M. Reynolds, William Scott.

Bailey: David, B.Arch. (Hons.) (Durham) (King's Coll. (Univ. of Durham), Newcastle-upon-Tyne, Sch. of Arch.), 31 Clarendon Road, Garston, Liverpool, 19. Prof. W. B. Edwards, Dr. Ronald Bradbury, F. H. Morley.

Bland: Constance Mary (Miss), B.Arch. (L'pool) (Liverpool Sch. of Arch.: Univ. of Liverpool), The Cottage, Hirst Courtney, nr. Selby. Prof. L. B. Budden, Donald Brooke, F. X. Velarde.

Broughton: Ann Phyllis (Miss) (Arch. Assoc. (London): Sch. of Arch.), 82B, Lexham Gardens, W.8. H. G. Goddard, L. H. Bucknell, R. F. Jordan.

Buckler: Derek William, B.A. (Hons. Arch.) (Mancr.) (Victoria Univ., Manchester: Sch. of Arch.), 74 Albert Avenue, Sedgley Park, Prestwich, Lancs. Prof. R. A. Cordingley, U. A. Coates, F. L. Halliday.

Campbell: James, Dip.Arch. (Dundee) (Dundee Coll. of Art: Sch. of Arch.), 3 Beaufort Buildings, The Spa, Gloucester. John Needham, S. E. Urwin, H. F. Trew.

Caulfield: Roy [Final], 221 Castle Lane, Solihull, Warwickshire. H. W. Hobbiss, S. N. Cooke, F. J. Osborne.

Chalton: John Kenneth (Birmingham Sch. of Arch.), 174 Orphanage Road, Erdington, Birmingham, 24. George Drysdale, J. B. Surman, F. W. B. Yorke.

Coxon: Rowland Francis (Nottingham Sch. of Arch.), Lea House, Ash Green, Loughton, Essex. Z. Sirotkin, and applying for nomination by the Council under Bye-law 3 (*d*).

Cumming: Archibald, B.Sc. (Glasgow Sch. of Arch.), 289 Churchill Drive, Glasgow, W.1. Prof. W. J. Smith, Col. J. M. Arthur, T. H. Hughes.

Fisher: John (Nottingham Sch. of Arch.), 2 Rushworth Court, Loughborough Road, West Bridgford, Nottingham. K. W. F. Harris, John Woollatt, E. Frear.

Fogarty: John Owen (Northern Poly. (London): Dept. of Arch.), 173 Oldfield Lane, Greenford, Middx. T. E. Scott, H. C. Mason, O. F. Savege.

Gardiner: Stephen (Arch. Assoc. (London): Sch. of Arch.), 30 Elm Park Road, Chelsea, S.W.3. R. F. Jordan, H. G. Goddard, L. H. Bucknell.

Goodman: David Archibald Samaria (Nottingham Sch. of Arch.), 10 Lenton Road, The Park, Nottingham. T. C. Howitt, A. J. Thraves, J. W. M. Dudding.

Hye: Abdur Rahman, Dip.Arch. (Edin.) (Edin. Coll. of Art: Sch. of Arch.), 30 Rankeillor Street, Edinburgh. Applying for nomination by the Council under Bye-law 3 (*d*).

Korner: Renate (Miss), B.Arch. (Lond.) (Bartlett Sch. of Arch.: Univ. of London), 109 Portsea Hall, London, W.2. Prof. H. O. Corfiato, C. G. Stillman, R. T. Grummant.

Martin: Jenifer Hirst (Miss) (Arch. Assoc. (London): Sch. of Arch.), 6 Grove Road, Sutton, Surrey. R. F. Jordan, R. J. H. Minty, H. G. Goddard.

Mason: Margaret Joan Elfreda (Miss) (Northern Poly. (London): Dept. of Arch.), 3 Middleton Avenue, Hove, 3, Sussex. K. E. Black, T. E. Scott, H. S. Goodhart-Rendel.

Miller: James William Cormack, B.Sc. (Glasgow Sch. of Arch.), Angle Park, Wick, Caithness. Prof. W. J. Smith, Prof. A. E. Richardson, T. H. Hughes.

Mills: William James Norman (Welsh Sch. of Arch.: The Tech. Coll., Cardiff), 50 Eastland Road, Neath, Glamorgan. Lewis John, Sir Percy Thomas, O. S. Portsmouth.

Platt: Philip Ernest, Dip.Arch. (Leeds) (Leeds Sch. of Arch.), The Thatched House, Bolling Road, Ilkley. Col. H. W. Barker, Eric Morley, W. Illingworth.

Pogson: John Henry (Nottingham Sch. of Arch.), 39 Gordon Road, Nottingham. A. E. Eberlin, R. W. Cooper, and applying for nomination by the Council under Bye-law 3 (*d*).

Puri: Jagdash Chand, Dip.Arch. (Edin.) (Edin. Coll. of Art.: Sch. of Arch.), 29 East Preston Street, Edinburgh. Applying for nomination by the Council under Bye-law 3 (*d*).

Shaw: Pamela Jean (Miss) (King's Coll. (Univ. of Durham), Newcastle-upon-Tyne: Sch. of Arch.), 575 Bradford Road, Huddersfield. Prof. W. B. Edwards, J. H. Napper, Hubert Bennett.

Shaw: Robert Sydney, Dip.Arch. (Dist.) (L'pool) (Liverpool Sch. of Arch.: Univ. of Liverpool), 'Greenways', Allerton Road, Liverpool, 18. Prof. L. B. Budden, Sir Lancelot Keay, H. A. Dod.

Shorten: Derrick Richard, B.Arch. (Hons.) (L'pool) (Liverpool Sch. of Arch.: Univ. of Liverpool), c/o Hemel Hempstead Development Corporation, Westbrook Hay, Boxmoor, Herts. Prof. L. B. Budden, Donald Brooke, B. A. Miller.

Thorpe: Frederick William (Nottingham Sch. of Arch.), 37 Kingswood Road, West Bridgford, Nottingham. E. W. Roberts, E. Frear, and applying for nomination by the Council under Bye-law 3 (*d*).

Walker: Arthur Ronald, Dip.Arch. (Dist.) (Durham) (King's Coll. (Univ. of Durham), Newcastle-upon-Tyne: Sch. of Arch.), 14 St. John's Square, Wakefield. Prof. W. B. Edwards, J. H. Napper, Hubert Bennett.

West: Lindsay Brewis, B.Arch. (Hons.) (Durham) (King's Coll. (Univ. of Durham), Newcastle-upon-Tyne: Sch. of Arch.), 37 Harton Grove, South Shields. Prof. W. B. Edwards, J. H. Napper, T. A. Page.

AS LICENTIATES (11)

Birch: Percy Cyril, 'Cherry Croft', Dayseys Hill, Outwood, Surrey. W. G. L. Cheriton, H. P. Gordon, W. S. Grice.

Busby: John Chambers, Dumbarton County Architect's Dept., 18 Park Circus, Glasgow, C.3; 7 Kirk Crescent, Old Kilpatrick, Dumbartonshire. Joseph Weekes, William McCrea, A. N. Malcolm.

de Lara: Louis George Charles, D.F.M., County Architect's Dept., County Hall, Dorchester, Dorset; 54 Market Street, Poole, Dorset. H. E. Matthews, Cyril Fifield, E. W. Lewis.

Evans: Richard Charles, 53 Plough Lane, Wimbledon, S.W.17; 47 Trinity Court, Gray's Inn Road, W.C.1. Applying for nomination by the Council under Bye-law 3 (*d*).

McKinney: James, County Architect's Office, 18 Park Circus, Glasgow, C.3; 'Rockscrag', Barloan Crescent, Dumbarton. Joseph Weekes, William McCrea, A. N. Malcolm.

Marsh: Kenneth James Jackman, Grove Chambers, 57a Southbourne Grove, Bournemouth; 129 Cranleigh Road, Bournemouth. R. A. Phillips, A. E. Geens, L. S. Youngman.

Read: Charles Alfred James, The Mount, Chorleywood, Herts. J. C. C. Bruce, F. R. S. Yorke, W. N. Couldrey.

Reiss-Smith: Mervyn Kenneth, 70 Hill Park Crescent, Plymouth; 50 Brickham Park Road, Peverell, Plymouth. J. L. Fouracre, Philip Tilden, Paul Badcock.

Riss: Egon, c/o The National Coal Board, 19/21 Great Portland Street, W.1; 16 Wessex Gardens, N.W.11. R. F. Jordan, Howard Robertson, T. S. Tait.

Ruhemann: Frederick Abraham, Messrs. Dugdale and Ruhemann, 46 Belsize Square, N.W.3; 17a Belsize Square, N.W.3. The Hon. Godfrey Samuel, Frederick Etchells, Bertram Carter.

Scott: Ernest, Messrs. Scott and Johnson, 5 Cornhill, Bury St. Edmunds; 8 Highbury Crescent, Bury St. Edmunds. Applying for nomination by the Council under Bye-law 3 (*d*).

ELECTION: 21 JUNE 1949

An election of candidates for membership will take place on 21 June 1949. The names and addresses of the overseas candidates, with the names of their proposers, are herewith published for the information of members. Notice of any objection or any other communication respecting them must be sent to the Secretary, R.I.B.A., not later than Saturday 28 May 1949.

The names following the applicant's address are those of his proposers.

AS ASSOCIATES (3)

The name of a school, or schools, after a candidate's name indicates the passing of a recognized course.

Carter: George Neild, B.Arch. (Auckland) (Univ. Coll., Auckland, New Zealand: Sch. of Arch.), 301, South British Building, Shortland Street, Auckland, C.1, New Zealand. W. H. Gummer, C. R. Ford, M. K. Draffin.

Chowdhury: Jugal Kishore, Dip.T.P. (Lond.) [Final], Goalpara, Assam, India. Prof. H. O. Corfiato, A. F. B. Anderson, Robert Atkinson.

Warwick: James Cochrane, Dip.Arch. (Lond.) (Bartlett Sch. of Arch.: Univ. of London), Apartment 405, 1555 Summerhill Avenue, Montreal, P.Q., Canada. Prof. H. O. Corfiato, L. S. Stanley, D. du R. Aberdeen.

Notes from the Minutes of the Council

MEETING HELD 11 JANUARY 1949

New Year Greetings: The President extended his cordial good wishes for 1949 to members of Council and members of the Institute's staff.

New Year Honours: The Secretary reported the following awards in the New Year Honours list: *Knights Bachelor:* J. Hubert Worthington, O.B.E., A.R.A. [*F*]; H. L. Guy, C.B.E., D.Sc., M.I.C.E., M.I.Mech.E., F.R.S., Chairman of the Mechanical Engineering Research Organization, Department of Scientific and Industrial Research; Secretary of the Institution of Mechanical Engineers. *G.C.M.G.:* The Right Hon. Viscount Portal, D.S.O., M.V.O., V.L. [*Hon. F*]. *Royal Victorian Chain:* The Archbishop of Canterbury (Dr. Geoffrey Francis Fisher, D.D. [*Hon. F*]). *C.B.E.:* C. C. W. Goodale, Director of Contracts, Ministry of Works; E. J. Smith, Chairman, Wales Joint Committee for the Building Industry, and Past President, National Federation of Building Trades Employers. *O.B.E.:* D. N. Daunton, Asst. Chief Architect, Ministry of Works; W. E. Fishburn, Vice-President, National Federation of Building Trades Employers; Seton H. F. Lloyd [*A*], Adviser to Department of Antiquities, Government of Iraq.

It was agreed to send the cordial congratulations of the Council to the recipients of these awards. On the proposition of the President a hearty vote of congratulations was accorded to the Secretary, Mr. C. D. Spragg, on the award of the C.B.E. conferred upon him.

Election of Royal Gold Medallist, 1949: In accordance with the terms of Bye-law 62 the Council resolved with acclamation to submit for the approval of His Majesty the King the name of Mr. Howard Robertson [*F*], as recipient of the Royal Gold Medal, 1949.

Appointments

(A) Architects' Registration Council of the United Kingdom, Admission Committee: R.I.B.A. Representative: Mr. C. J. Epril [*F*], in place of Mr. Arthur Bailey [*F*].

(B) Architectural Education Committee of the University of London: R.I.B.A. Representatives for the year 1949: Mr. Martin S. Briggs [*F*] re-appointed, Mr. Kenneth M. B. Cross [*F*], in place of Mr. A. B. Knapp-Fisher [*F*].

(C) Central Institute of Art and Design: R.I.B.A. Representative: Mr. A. B. Knapp-Fisher [*F*], in place of Mr. H. M. Fletcher [*F*].

(D) Ministry of Fuel and Power, Non-Industrial and Domestic Sub-Committee of Fuel Efficiency Committee: R.I.B.A. Representative: Mr. George Fairweather [*F*].

(E) B.S.I. Committee ACM Acoustics Industry Committee: R.I.B.A. Representatives: Mr. Hope Bagenal [*F*], Dr. J. L. Martin [*F*].

Christmas Holiday Lectures: The Secretary reported that the recent series of Christmas Holiday Lectures for Boys and Girls given by Mr. Peter F. Shepheard [*A*] had proved a marked success, the hall having been filled by appreciative audiences at each lecture. A cordial vote of thanks was passed in favour of Mr. Peter Shepheard.

R.I.B.A. Building: Mortgage Repayment: The Honorary Treasurer reported that the outstanding balance of the mortgage on the R.I.B.A. building had been paid off on 29 December 1948, the earliest date on which such repayment could be made under the original agreement. After repayment a small surplus remained from the original Building Fund which, in accordance with the Council's decision, would be transferred to the new Completion of Premises Fund. The Honorary

Treasurer referred gratefully to the generosity of the Allied Societies and of many members who had supported the Appeal Fund and paid tribute to Mr. L. Sylvester Sullivan [*F*] for his wisdom and far-sightedness in placing the financial arrangements on such an excellent basis during his tenure of the office of Honorary Treasurer from 1938 to 1945.

On behalf of the Council the President presented to Mr. Sullivan a water-colour of a Sussex landscape by Charles Knight as a token of their gratitude for his devoted work. Mr. Sullivan replied, thanking the Council for their expression of appreciation and for the gift presented to him, and said that such a generous and unexpected tribute had moved him deeply. He thought it might be of interest to members of Council to have some record of the action which had been taken during his term of office to put the Institute's finances on a firm basis.

When he took over the Institute had only just paid the final account on the building, and had an overdraft of £150,000 at the bank. To offset that there were three assets—the R.I.B.A. building, the premises in Conduit Street and, thirdly, an intangible asset in the growing membership of the Institute and the goodwill of members. The third asset was by far the most valuable.

The first step was to reduce the overdraft, and this was done by arranging a mortgage for £95,000, which required an annual payment for interest and amortization of nearly £6,000. The deed contained a clause to the effect that neither side could alter the conditions during the first ten years. The total period for clearance would be 27 years, and the interest rate was 4¼ per cent as opposed to 5 per cent on the bank overdraft.

The Finance and House Committee then proceeded to carry out a thorough investigation and overhaul of the Institute's finances, and in their work had the valuable help of Mr. Goodhart-Rendel, then President. On their advice, the Council passed a resolution that allotted all annual surpluses, all legacies free of trust, and entrance fees to the debt redemption. The object of the Committee was to clear the overdraft and to build up a sum of about £75,000 within ten years so that the balance of the mortgage could be paid off at the earliest date. The next step was the sale of the Conduit Street premises. After some difficulty these were disposed of though not at the boom value which had originally been placed upon them. An Appeal Fund was then launched, and was most generously supported by Allied Societies, who agreed to reduction in the rebates payable to them and reduction in travelling expenses, and by many individual members who subscribed. As a consequence, the Appeal Fund at the date of the redemption of the mortgage stood at £10,500, and he was profoundly grateful for the support and generosity which had been shown.

Having placed the financial structure on a basis proper for any Institute, whereby entrance fees and surpluses go to capital, interest on capital is returned to capital and thus reserves are built up, the Committee felt easier in mind. With the outbreak of war, the Institute's activities had greatly to be reduced, which permitted of the waiving of many subscriptions from members serving in the forces. Nevertheless, the surpluses available through the war years were of great value in adding to reserves.

Mr. Sullivan said that the attainment of the objects he had worked for was his greatest reward, and that thanks were due rather from him to all those who had helped him in his work; in particular, to Mr. Denman who had worked with him from the first and had carried on so ably after he gave up; to Mr. Heaps, whose acute business brain had been a tower of strength; to Mr. Goodhart-Rendel, Mr. Stanley Hall and Mr. Ansell during their terms of office as President, and to the Secretary and the whole of the Institute's staff for their loyal co-operation and the administrative economies they had effected.

He ended with a tribute to the great-hearted Allied Societies who had foregone so much and put up with many discomforts, and to the general body of members—our intangible and most valuable asset.

Methods of Measuring Cubic Content of Buildings: The President informed the Council that following a discussion with Sir Malcolm Trustram Eve, Chairman of the Central Land Board, on the possibility of agreeing on one uniform system for estimating the cubic content of buildings with a view to introducing an equable practice in connection with the provisions of the Town and Country Planning Act, 1947, arrangements had been made for a series of informal discussions to be held jointly between representatives of the Central Land Board, the Royal Institution of Chartered Surveyors and the R.I.B.A. The R.I.B.A. representatives in these discussions would be the President, Mr. C. H. Aslin (Vice-President), and Mr. T. Cecil Howitt [*F*].

It was agreed that the President's action be approved.

British Architects' Conference, 1951: The Council considered a letter from The Council for Architecture, Town Planning and Building Research, Festival of Britain, in which suggestions were made as to the organization by institutions of activities in their own spheres during 1951 as adjuncts to the Festival of Britain.

The Council considered the advisability of holding the British Architects' Conference in London, but in view of reports on the probable scarcity of accommodation in London by reason of foreign visitors to the Festival, it was agreed to consider what special functions might appropriately be organized by the Institute in support of the Festival and to accept the invitation of the Royal Society of Ulster Architects to hold the British Architects' Conference, 1951, in Belfast to coincide with the Jubilee Celebrations of the Society.

Basis of Remuneration for Architects employed on War Department Work for the Regular Army and for the Territorial Army Association: The Council approved the following agreement which had been negotiated with the War Office.

It should be observed in regard to Clause 5 that fees for layout schemes for married quarters have yet to be agreed. Negotiations on this question are at an advanced stage:

(1) Fees payable for work carried out for the War Department shall be based upon the R.I.B.A. Scale of Professional Charges revised 1948.

(2) In those cases, however, in which the War Department supplies for the guidance of the architect, in addition to the usual instructions, standard drawings and specifications of a kind which relieves the architect of work he would normally carry out in his own office, fees shall be based upon the R.I.B.A. Scale of Professional Charges amended as follows:

(*a*) That 5 per cent be substituted for 6 per cent in Clause 2 (*a*) (i) of the Scale.

(*b*) That the graduated scale for works not exceeding £4,000 in value be from 9 per cent to 5 per cent instead of from 10 per cent to 6 per cent as in Clause 2 (*a*) (ii) of the Scale.

(*c*) That Clause 2 (*b*) of the Scale be deleted and that alterations and additions be charged as for new work as in (*a*) and (*b*) above.

(*d*) That the fees for partial service be charged in accordance with Clause 2 (*e*) of the Scale subject to the reduction of the basic fee as in (*a*) and (*b*) above.

(*e*) That in cases where the architect is to perform all the services laid down in Clause 2 (*a*) of the Scale, with the exception of supervision, the fee charged under (*a*) and (*b*) above is to be reduced by one-fifth.

(*f*) That the percentage charge is to be based on the total cost of all executed works or orders (exclusive of the services included in (*h*) below) or, if the work is not carried out, on the estimated cost thereof in accordance with (*d*) above. Where consultants are appointed direct by the War Department, the architect's fee for the work upon which the consultant's services are retained shall be reduced by not more than one-third, provided always that the architect's fee on the cost of the whole scheme shall not be reduced by more than one-sixth. In the event of such work being excluded from the contract the architect shall not be entitled to a percentage fee upon the cost of such work, but shall be paid a fee to be agreed between him and the War Department for the necessary collaboration.

(*g*) In the event of the repetition of unit blocks for which no further drawings are required, the fee shall be 1¼ per cent upon the cost of such repeated blocks, increased by 1 per cent if supervision is involved.

(*h*) That for services referred to in Clause 2 (h) of the Scale and not included in the percentage fee, the charge to be based on the time occupied at the following rates:

Principal's time .. .. £7 7*s.* 0*d.* a day
Senior Assistant's time (for assistants receiving £8 8*s.* 0*d.* a week and upwards £3 13*s.* 6*d.* a day
Junior Assistant's time (for assistants receiving up to £8 8*s.* 0*d.* a week) £2 12*s.* 6*d.* a day

(*i*) That on all final accounts for fees chargeable under Clauses 2 and 7 of the R.I.B.A. Scale of Charges up to and not exceeding a total of £1,150 there shall be a surcharge of 15 per cent on the first £1,000 of the fee.

(3) That the fees for preparing quantities shall be based on the scale agreed between the War Office and the Royal Institution of Chartered Surveyors.

(4) That for Hutting Schemes, architects' fees may be paid up to 6 per cent on the total cost of the service, including the value of the huts if claimed by the architect.

(5) That for layout schemes for Married Quarters for the Regular or Territorial Army, in which designs of the houses shall be supplied by the War Department, the fees shall be in accordance with a scale to be agreed separately between the R.I.B.A. and the War Department.

(6) Either the War Department or the R.I.B.A. may re-open the question of the scale of fees if at any time the altered circumstances make this course seem necessary.

(7) In the event of any dispute arising between the War Office and the architect as to the interpretation of this scale or matters arising therefrom, such dispute shall be referred to an arbitrator appointed by the President of the Royal Institute of British Architects.

Industrial Design Competitions: On the recommendation of the Competitions Committee the Council approved a Model Form of Conditions and Directions for Assessors in connection with Industrial Design Competitions, i.e. for buildings, parts of buildings, portable buildings and street furniture, where repetition of units is involved.

Notices Advertising Competitions: The Council approved an amendment to the Directions for Assessors to include a paragraph stressing the importance of giving the latest date by which applications for Conditions are to be received

in all notices advertising competitions, and recommending that this date should be from 6 to 8 weeks after the publication of notices.

Committee to consider Present and Future of Private Architectural Practice: The Council considered a report in which the desirability of collecting as much information as possible on the position of architects was stressed, and it was agreed to approve a proposal that a questionnaire be sent to each individual member of the Institute. The Council noted that replies to the questionnaire would be treated in confidence and the hope was expressed that members generally would make a point of completing and returning the form without undue delay.

Membership: The following members were elected: as Fellows, 7; as Associates, 56; as Licentiates, 14. Students: 93 Probationers were elected as Students.

Applications for Election: Applications for election were approved as follows: *Election 8 March* 1949: as Fellows, 3; as Associates, 29; as Licentiates, 11. *Election 21 June* 1949 (*Overseas Candidates*): as Associates, 3.

Applications for Reinstatement: The following applications were approved: as Associate, Maxwell Fordyce Christie; as Licentiate, Walter James Smith.

Resignations: The following resignations were accepted with regret: Walter Brand [*F*], George Edmonds Fitzgerald [*F*], John Henry Beart Foss [*F*], Brigadier William Alexander Henderson, C.M.G., D.S.O., V.D. [*F*], Gilbert Henry Lovegrove [*F*], John William Mawson [*F*], Mrs. Aylmer Gick (*nee* Rowntree) [*A*], John Robert Hilton [*A*], Francis Strethill Wright [*A*], Arthur George Anderson [*L*], Robert Whitelaw Caldwell [*L*], William Henry Drober [*L*], W. H. Glover [*L*], Edward William Cook Howard [*L*], James Austin Laird [*L*], Leopold Monk Newell [*L*], Ralph Skeate Ponting [*L*], George Brooking Selleck [*L*], Henry Silverston [*L*], Herbert Thomas Tilson [*L*], John Basil Lowder Tolhurst [*L*], Raymond Walker [*L*], Bertie Cooper [*Retd. L*].

Applications for Transfer to Retired Members' Class under Bye-law 15: The following applications were approved: as Retired Fellows: Frederick de Jersey Clere, Ashley Scarlett Killby, James Constable Leed, Adrien Louvin Sharp, Albert John Toomer, Bernard Michael Ward; as Retired Associates: Harry Bannister, Henry Thomas Bromley, John Stewart Hardie, Jack Bruce Johnston; as Retired Licentiates: Robert Proctor Bush, William Hoe, John Beardwood Jolly, William Kerr, Ernest Edward Stokes.

Members' Column

This column is reserved for notices of changes of address, partnership and partnerships vacant, or wanted, practices for sale or wanted, office accommodation, and personal notices other than of posts wanted as salaried assistants for which the Institute's Employment Register is maintained.

APPOINTMENTS

Mr. I. H. L. King [*A*] has been appointed Principal Assistant Architect to the South-East Metropolitan Regional Hospital Board, and has taken up his duties at 27 Queen Anne Street, London, W.1. (LANgham 3264.)

Mr. P. B. Nash [*A*] has resigned his appointment as architect with the Ministry of Health to take up the appointment of Principal Assistant Architect on the H.Q. staff of the Birmingham Regional Hospital Board, 10 Augustus Road, Edgbaston, Birmingham.

Mr. J. Leslie Thomas [*L*], A.R.I.C.S., who has been appointed Architect to the Ebbw Vale Urban District Council, will be pleased to receive trade catalogues etc. at the Architect's Dept., Council Offices, Ebbw Vale, Monmouthshire.

PRACTICES AND PARTNERSHIPS

Mr. Harold J. Ashwell [*A*] has taken into partnership **Mr. G. S. Rhodes** [*A*] and will continue to practise at Mona Great House, Liguanea P.O., Jamaica, B.W.I. They will be pleased to receive trade catalogues etc.

Mr. A. Geoffrey Bazeley, M.B.E., M.A. [*A*], practising as **Geoffrey Bazeley and Partners** at 15/16 Alverton, Penzance, has taken into partnership **Mr. Peter J. Barbary**, M.B.E., G.M. [*A*], of Trevarth House, Gwennap, Redruth. They will practise under the name of **Geoffrey Bazeley and Barbary** at 15/16 Alverton, Penzance. (Penzance 2592.)

Mr. F. W. Beech [*F*] and **Mr. E. Curnow Cooke** [*L*] have combined their practices and they will practise as **F. W. Beech and E. Curnow Cooke** [*F*/*L*] at 15 Dix's Field, Exeter. (Exeter 4278.)

Mr. Laurence Kennard [*F*] F.R.I.C.S. and **Mr. C. W. Lowe** [*A*], hitherto practising under the name **'Laurence Kennard'**, will in future practise as **Kennard and Lowe,** Architects and Surveyors, 14 Railway Approach, London Bridge, London, S.E.1. (HOP 2732.)

Mr. D. N. Flatt, M.B.E. (*A*) is now in practice in Kitale, Kenya Colony, address P.O. Kitale, and will be pleased to receive trade catalogues etc.

Mr. Richard A. Le Fèvre [*A*], a partner in the firm of **Pictor, Snailum and Huggins** [*F*/*A*/*A*], Abbey Chambers, Bath, has by Deed Poll changed his name from 'Fever' to 'Le Fèvre'.

Mr. J. S. Lacey [*A*], A.M.T.P.I., 37 Hampstead Lane, London, N.6, has been appointed Lecturer on Town and Country Planning to the Department of Architecture, Northern Polytechnic.

Mr. T. S. Tait and **Mr. Gordon Tait** [*F*/*F*] have taken into partnership **Mr. F. Kennedy Axten, Mr. E. A. Blade** [*A*], **Mr. J. H. Wallace,** F.R.I.A.S., and **Mr. C. Spencer Willmott.** The firm will continue to practise under the name of **Sir John Burnet, Tait and Partners** at 10 Bedford Square, London, W.C.1, and 44 Charlotte Square, Edinburgh.

Messrs. Thomas and Rendell [*A*] have entered into partnership and commenced practice at Broadway Chambers, St. Peter's Street, St. Albans, Herts. They will be pleased to receive trade catalogues etc.

Messrs. Howard Williams and Partners [*F*/*A*/*A*] of 'Graystones', Priory St., Cardigan will be pleased to receive trade catalogues etc. relating to hospitals, hotels and farm buildings.

CHANGES OF ADDRESS

Mr. E. H. Firmin [*A*] has removed from 111 Park Street, London, W.1, to 10 Manchester Square, London, W.1. (WELbeck 2849/2840.)

Mr. William Gill [*A*], A.M.T.P.I., has been transferred to the Ministry of Town and Country Planning from the Ministry of Works. His new address is 11/13 Grosvenor Square, London, W.1. (GROsvenor 4921.)

Mr. Ronald Hardy, M.B.E. [*A*], has removed from 25 Gloucester Court, Kew, Surrey, to 20 Lowndes Street, Knightsbridge, London, S.W.1. (SLOane 3668.)

Mr. C. S. Jarrett [*A*] has removed from 51 Fitzjohn's Avenue, London, N.W.3, to 20 Dorset Square, London, N.W.1. (AMBassador 5597/8.)

The address of **Mr. H. S. Jaretzki** [*L*] is now 20 Dorset Square, London, N.W.1. (AMBassador 5597/8.)

Mr. David Ling [*A*] has removed to 205 Grosvenor Road, South Shields, Co. Durham.

PRACTICES AND PARTNERSHIPS WANTED AND AVAILABLE

Associate (37) seeks partnership or position with view to partnership in provincial practice, preferably in South or West England. Box 10, c/o Secretary, R.I.B.A.

Associate (44), school trained, varied experience in private practice and local authorities, now completely recovered from war service disability, seeks partnership or position leading thereto in Southern England. Box 9, c/o Secretary, R.I.B.A.

Fellow, fifteen years' experience, wishes to buy practice or partnership in South or South-West England, *not* London. Box 17, c/o Secretary, R.I.B.A.

Licentiate seeks partnership or would consider purchasing general practice, preferably Southern or East London area. Box 12, c/o Secretary, R.I.B.A.

Partnership available in established practice in West Central London. Box 15, c/o Secretary, R.I.B.A.

FOR SALE AND WANTED

For Sale. *Architectural Building Construction,* Volume 2, Part 1 and 2 (Jaggard and Drury), 7*s.* 6*d.* each; *Sanitation of Buildings,* (E. Thomas Swinson), 7*s.* 6*d.*; *Practical Designing in Reinforced Concrete* (Cantell), Part I, 7*s.* 6*d.*; *Structural Design in Steel Frame Buildings,* (P. J. Waldram), 5*s.*; *Houses and Gardens,* by Sir Edwin Lutyens (*Country Life Publication*), £3 3*s.* Box 14, c/o Secretary, R.I.B.A.

Wanted. Photo copying machine for 200-230 volt A.C., 50 cycles. Box 11, c/o Secretary, R.I.B.A.

Wanted. 3-point level, tripod and staff. Any member having these items for disposal reply Box 13, c/o Secretary, R.I.B.A.

Wanted. Two accurate surveyor's chains. Box 16, c/o Secretary, R.I.B.A.

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